```
US-10-412-699B-805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -MODEL=frame+ principal - DEV=x1h
-Q=/Cgn2_1/USPTO_spool/US1066642/runat_25082005_130057_24954/app_query.fasta_1.199
-Ds==bul1shed_Applications NA -QFMT=fastap - SUPFIX=rnpb - MINMATCH=6.1
-DSPCL=0 -LOOPEXT=0 - UNITS=bits - START=1 - END=1 - MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 - DOCALIGN=200 - THR SCORE=pct - THR MAX=100
-THR MIN=0 -ALIGN=15 - MODE=LOCAL -OUTFMT=pto - NORM=ext - HEAPSIZE=500 - MINLEN=0
-MAXIEN=200000000 - USER=US10666642 @CGN 1 1 798 @runat_25082005_130057_24954
-NCPU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NGG SCORES=0 -WAIT - DSPBLOCK=100
-LONGLOG -DEV TIMEOUT=120 - WARN TIMEOUT=30 - THRRADS=1 - XGAPOP=10 - XGAPDEXT=0.5
-FGAPOP=6 - FGĀPEXT=7 - YGAPOP=10 - YGAPEXT=0.5 - DELOPE=6 - DELEEXT=7
                                                                                                                                                                                                                                                       August 26, 2005, 01:06:48; Search time 519 Seconds (without alignments)

M. A. A. A. A. A. A. Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a
                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-666_642-194_COPY_111_164
298
1 DGFKMRKTEKKSVKNNINKR......RVERDGDDAAYVITTYEGVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published Applications NA:*

1: /cgn2_6/prodata/1/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/prodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/prodata/1/pubpna/USO6_NEW_PUB.seq:*
4: /cgn2_6/prodata/1/pubpna/USO6_NEW_PUB.seq:*
5: /cgn2_6/prodata/1/pubpna/USO6_NEW_PUB.seq:*
6: /cgn2_6/prodata/1/pubpna/USO8_NEW_PUB.seq:*
7: /cgn2_6/prodata/1/pubpna/USO8_NEW_PUB.seq:*
8: /cgn2_6/prodata/1/pubpna/USO8_NEW_PUB.seq:*
9: /cgn2_6/prodata/1/pubpna/USO8_NEW_PUB.seq:*
10: /cgn2_6/prodata/1/pubpna/USO9_PUBCOMB.seq:*
11: /cgn2_6/prodata/1/pubpna/USO9_PUBCOMB.seq:*
12: /cgn2_6/prodata/1/pubpna/USO9_NEW_PUB.seq:*
13: /cgn2_6/prodata/1/pubpna/USO9_NEW_PUB.seq:*
14: /cgn2_6/prodata/1/pubpna/USO09_NEW_PUB.seq:*
15: /cgn2_6/prodata/1/pubpna/USO09_NEW_PUB.seq:*
16: /cgn2_6/prodata/1/pubpna/USO09_NEW_PUB.seq:*
17: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
16: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
17: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
18: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
19: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
20: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
21: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
22: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
23: /cgn2_6/prodata/1/pubpna/USO0P_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14663426
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                       OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7331713 seqs, 3271544945 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                Run on:
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Coore Match Length DB 1D 10 10 10 10 10 10 10 10 10 10 10 10 10	0-412-699B-805	iption
1 298 100.0 585 18 US-249 100.0 585 18 US-249 100.0 585 18 US-249 100.0 585 18 US-249 103.6 641 18 US-249 103.6 103.0 108.0 10	0-412-699B-805	
1 298 100.0 585 18 US-49 88.6 641 18 US-49 88.6 103 20 US-49 88.6 103 20 US-49 88.6 103 20 US-49 88.6 103 20 US-49 88.7 680 18 US-49 US-49 88.7 680 18 US-49 US-49 </td <td>0-412-699B-805</td> <td></td>	0-412-699B-805	
2 249 83.6 641 18 US-49 83.6 641 18 US-49 83.6 6823 18 US-49 83.6 1039 20 US-69 18 US-69 US-	CCC	05, Ap
3 249 83.6 823 18 US-45 48.0 19 US-45 83.6 1663 18 US-45 83.6 1663 17 US-48 83.6 1663 17 US-48 83.6 1663 18 US-11 US-48 83.2 666 13 US-11 US-48 83.2 666 13 US-11 US-48 US-49 83.2 660 19 US-11 US-48 US-5	5-114-123	12391,
4 249 83.6 880 19 10 5 249 83.6 1039 20 US- 9 248 83.2 680 18 US- 10 248 83.2 680 18 US- 11 247 82.9 666 19 US- 11 247 82.9 952 18 US- 13 247 82.9 974 18 US- 14 247 82.9 974 18 US- 15 244 81.9 952 10 US- 16 244 81.9 974 18 US- 20 247 82.9 974 18 US- 21 247 81.9 966 19 US- 22 81.9 974 18 US- 24 81.9 966 19 US- 24 81.9 969	12-699B-161	1614
5 249 83.6 1039 20 US-49 83.6 1663 17 US-49 83.6 1663 17 US-49 83.6 1663 18 US-10 0 18 US-11 US-12 US-13 US-14 US-14 US-15 US-16 US-16 US-16 US-17 US-18 US-18 <td>-767-701-1176</td> <td>11768,</td>	-767-701-1176	11768,
6 249 83.6 1663 17 US- 7 248 83.2 680 19 US- 10 247 82.9 952 18 US- 11 247 82.9 952 18 US- 13 247 82.9 974 18 US- 14 247 82.9 974 18 US- 15 244 81.9 1696 19 US- 16 244 81.9 1696 10 US- 17 242 81.9 1696 11 US- 24 242 81.9 1696 11 US- 24 242 81.5 669 19 US- 24 242 81.7 099 20 US- 24 242 81.7 099 20 US- 25 242 81.2 603 20 US- 26 242 81.2 603 20 US- 27 242 81.2 603 10 US- 28 239 80.2 1235 18 US- 28 230 77.2 748 10 US- 28 230 77.2 748 17 US- 29 21 US- 20 20 20 US- 20 20 US- 20 20 US- 21 21 US- 21	0-425-115-7340	73408,
7 249 83.6 1663 18 US- 9 248 83.2 680 18 US- 10 248 83.2 680 18 US- 11 247 82.9 966 19 US- 13 247 82.9 974 18 US- 14 247 82.9 974 18 US- 16 244 81.9 974 18 US- 17 244 81.9 974 18 US- 18 247 81.9 974 18 US- 20 244 81.9 974 18 US- 21 244 81.9 1696 19 US- 22 243 81.5 834 20 US- 24 81.2 81.2 834 20 US- 24 81.2 81.2 82.1 US- 24 81.2	-780A-153	1531,
8 248 83.2 680 18 US-10 9 248 83.2 743 18 US-11 10 248 83.2 743 18 US-13 11 247 82.9 952 18 US-18 13 247 82.9 974 18 US-18 14 247 82.9 974 18 US-19 15 244 81.9 974 18 US-19 16 244 81.9 1696 19 US-19 24 81.9 974 18 US-19 24 81.9 1696 19 US-19 24 81.9 1696 19 US-19 24 81.5 86.9 10 US-19 24 81.5 83.4 10 US-19 24 81.5 84.9 10 US-19 24 81.2 81.2 0 US-19 <td>0-412-699B-162</td> <td>1621,</td>	0-412-699B-162	1621,
9 248 83.2 743 18 US-110 244 83.2 666 19 US-112 247 82.9 952 18 US-113 247 82.9 952 18 US-114 US-116 US-118 US-118 US-118 US-118 US-118 US-119	0-412-699B-161	1613,
10 248 83.2 802 20 US- 11 247 82.9 666 19 US- 13 247 82.9 666 19 US- 14 244 81.9 580 20 US- 15 244 81.9 1696 19 US- 16 244 81.9 1696 19 US- 17 244 81.9 1696 19 US- 20 243 81.5 664 19 US- 21 242 81.5 664 19 US- 22 242 81.2 825 10 US- 24 242 81.2 825 10 US- 25 242 81.2 825 10 US- 26 242 81.2 825 10 US- 27 242 81.2 825 10 US- 28 239 80.2 1235 18 US- 29 239 80.2 1235 18 US- 23 77.9 999 10 US- 23 77.2 748 10 US- 24 230 77.2 748 17 US- 25 230 77.2 748 17 US- 26 230 77.2 748 17 US- 27 248 17 US- 28 230 77.2 748 17 US- 28 28 28 28 77.3 US- 28 77.4 US- 28 77.5 US- 28	0-412-699B-161	1612,
11 247 82.9 666 19 US-12 12 247 82.9 952 18 US-18 13 247 82.9 974 18 US-18 14 244 81.9 974 18 US-19 15 244 81.9 1696 19 US-19 18 243 81.9 1696 19 US-19 20 243 81.9 1696 19 US-19 21 244 81.9 1696 19 US-19 22 243 81.5 669 19 US-19 23 81.5 81.2 834 20 US-19 24 81.2 81.2 834 20 US-19 25 242 81.2 823 10 US-19 26 242 81.2 825 10 US-19 27 242 81.2 92 US-19 US-19	0-425-115-931	e 93169,
12 247 82.9 952 18 US-113 247 82.9 974 18 US-116	-437-963-637	6371
13 247 82.9 974 18 US-14 14 244 81.9 974 18 US-16 16 244 81.9 580 US-16	-425-114-103	10354
14 247 82.9 974 18 <td< td=""><td>-599-115</td><td>115917</td></td<>	-599-115	115917
15 244 81.9 580 20 US-16 17 US-16	2-699B-16	1609,
16 244 81.9 1696 17 US-14 81.9 1696 18 US-18 18	0-425-115-743	74300,
17 244 81.9 1696 18 US-19 18 243 81.5 6669 19 US-19 20 243 81.5 8669 19 US-19 21 242 81.5 834 20 US-19 23 242 81.2 852 20 US-19 24 81.2 821 19 US-19 25 242 81.2 821 19 US-21 27 242 81.2 961 19 US-21 US-21 US-21 29 23 80.2 1235 18 US-23	.0-374-780A-1530	1530,
18 243 81.5 669 19 US-13 29 243 81.5 834 18 US-18 20 243 81.5 834 18 US-18 21 242 81.2 803 20 US-18 24 81.2 803 20 US-19 US-19 US-19 25 242 81.2 863 20 US-19	ò	16
19 243 81.5 834 18 18 18 18 18 18 18 18 18 18 18 24 81.5 834 20 US- 22 242 81.2 81.2 821 19 US- 22 24 81.2 821 19 US- 22 24 81.2 82 13 US- 22 24 81.2 82 13 US- 22 24 81.2 82 13 US- 23 10 US- 23 12 US- 23 13 US- 23 18 US- 23 US- 23 US- 23 13		equence 1686,
20 243 81.5 834 20 US- 21 242 81.2 603 00 US- 23 242 81.2 603 00 US- 24 81.2 821 19 US- US- 25 242 81.2 825 17 US- US- <td< td=""><td>ò</td><td>1615,</td></td<>	ò	1615,
21 242 81.2 352 20 US- 23 242 81.2 603 20 US- 24 81.2 86.3 20 US- 25 242 81.2 825 18 US- 26 242 81.2 96.2 17 US- 27 242 81.2 96.5 18 US- 28 239 80.2 1235 18 US- 30 237 79.5 1120 19 US- 31 232 77.9 999 17 US- 34 230 77.2 748 10 US- 36 230 77.2 748 10 US- 39 230 77.2 748 17 US- 39 230 77.2 748 17 US- 39 230 77.2 748 10 US- 40 20<	.0-425-115-90976	976,
22 242 81.2 603 20 US- 23 242 81.2 821 19 US- 24 81.2 821 19 US- 25 242 81.2 821 19 US- 26 242 81.2 951 19 US- 28 239 80.2 1235 18 US- 29 239 80.2 1235 18 US- 31 237 77.9 999 18 US- 32 77.9 999 18 US- 34 230 77.2 748 10 US- 35 230 77.2 748 10 US- 36 230 77.2 748 10 US- 39 230 77.2 748 19 US- 40 202 77.2 748 18 US- 41 197 66.1 </td <td>.0-856-499-1204</td> <td>1204,</td>	.0-856-499-1204	1204,
23 242 81.2 821 19 US- 24 242 81.2 825 17 US- 26 242 81.2 961 19 US- 27 242 81.2 961 19 US- 29 239 80.2 1235 18 US- 30 237 79.5 1235 18 US- 31 232 77.9 999 18 US- 32 232 77.9 999 18 US- 34 230 77.2 748 10 US- 36 230 77.2 748 10 US- 36 230 77.2 748 10 US- 39 230 77.2 748 10 US- 39 230 77.2 748 10 US- 40 202 67.8 14 US- 40 202 <td>.0-425-115-132529</td> <td>132529</td>	.0-425-115-132529	132529
24 242 81.2 825 17 US 26 242 81.2 961 19 US 26 242 81.2 961 19 US 27 242 81.2 961 19 US 28 239 80.2 1235 18 US 30 237 79.5 1120 19 US 31 232 77.9 999 17 US 33 232 77.9 999 19 US 34 230 77.2 748 10 US 36 230 77.2 748 10 US 37 230 77.2 748 17 US 39 230 77.2 748 17 US 40 202 27.2 748 17 US 41 197 66.1 77.4 19 US 42 <t< td=""><td></td><td>77029,</td></t<>		77029,
25 242 81.2 825 18 US 26 242 81.2 995 10 US 28 239 80.2 1235 18 US 29 239 80.2 1235 18 US 30 237 79.5 11235 18 US 31 232 77.9 999 17 US 33 232 77.9 999 18 US 34 230 77.2 748 10 US 36 230 77.2 748 10 US 36 230 77.2 748 10 US 38 230 77.2 748 18 US 40 230 77.2 748 18 US 40 200 67.8 577 18 US 41 197 66.1 724 14 US	.0-374-780A-1529	Sequence 1529, Ap
26 242 81.2 961 19 US 27 242 81.2 961 19 US 28 239 80.2 1235 18 US 30 237 79.5 1235 18 US 31 232 77.9 999 18 US 33 232 77.9 1092 19 US 34 230 77.2 748 10 US 36 230 77.2 748 10 US 36 230 77.2 748 17 US 39 230 77.2 748 17 US 40 202 66.1 17 18 US 41 197 66.1 724 14 US	Ó	1616,
27 242 81.2 999 20 US 29 239 80.2 1235 18 US 29 239 80.2 1235 18 US 30 237 77.9 999 17 US 33 232 77.9 1092 19 US 34 230 77.2 748 10 US 36 230 77.2 748 10 US 37 230 77.2 748 17 US 38 230 77.2 748 17 US 39 230 77.2 748 17 US 40 202 66.1 17 US 41 197 66.1 724 14 US	0-437-963-55249	55249,
28 239 80.2 1235 18 US 29 237 80.2 1235 18 US 30 237 79.5 1120 19 US 31 232 77.9 999 17 US 34 230 77.2 748 10 US 35 230 77.2 748 10 US 36 230 77.2 748 17 US 37 230 77.2 748 17 US 38 230 77.2 748 17 US 39 230 77.2 748 18 US 39 230 77.2 748 18 US 39 230 77.2 748 19 US 39 230 77.2 748 US	ò	1701
29 239 80.2 1235 18 US 31 232 77.9 1920 19 US 32 232 77.9 999 18 US 33 232 77.9 1092 19 US 34 230 77.2 748 10 US 35 230 77.2 748 10 US 36 230 77.2 748 17 US 37 230 77.2 748 17 US 38 230 77.2 748 17 US 38 230 77.2 748 18 US 39 230 77.2 748 19 US 41 197 66.1 724 US	ċ	112793
30 237 79.5 1120 19 US 32 232 77.9 999 17 US 33 232 77.9 1092 19 US 34 230 77.2 748 10 US 36 230 77.2 748 10 US 36 230 77.2 748 17 US 37 230 77.2 748 17 US 38 230 77.2 748 17 US 39 230 77.2 748 17 US 40 202 67.8 577 18 US 41 197 66.1 724 US	Ċ	equence 1608
31 232 77.9 999 17 US 32 232 77.9 999 18 US 34 230 77.2 1092 18 US 35 230 77.2 748 10 US 37 230 77.2 748 10 US 37 230 77.2 748 17 US 38 230 77.2 748 17 US 39 230 77.2 748 18 US 39 230 77.2 748 US 41 197 66.1 724 US	Ċ	equence 34431,
32 232 77.9 999 18 US 34 230 77.2 748 19 US 35 230 77.2 748 10 US 36 230 77.2 748 17 US 37 230 77.2 748 17 US 38 230 77.2 748 18 US 39 230 77.2 748 18 US 39 230 77.2 748 18 US 41 197 66.1 724 US	ò	Sequence 1532, Ap
232 77.9 1092 19 US 230 77.2 748 10 US 230 77.2 748 10 US 230 77.2 748 17 US 230 77.2 748 18 US 230 77.2 748 19 US 240 65.1 724 16 US	.0-412-699B-1622	equence 162
230 77.2 748 10 US 230 77.2 748 10 US 230 77.2 748 17 US 230 77.2 748 17 US 230 77.2 748 18 US 230 77.2 748 18 US 230 77.2 748 19 US 197 66.1 724 10 US	Ó	equence 312
230 77.2 748 10 US 230 77.2 748 17 US 230 77.2 748 18 US 230 77.2 748 18 US 230 77.2 748 18 US 230 77.2 748 19 US 197 66.1 724 10 US	9-533-029-29	equence 29,
230 77.2 748 17 US 230 77.2 748 18 US 230 77.2 748 18 US 230 77.2 748 2 US 202 67.8 577 18 US 197 66.1 724 10 US	9-934-455-1	equence 195
230 77.2 748 17 US 230 77.2 748 18 US 230 77.2 748 22 US 202 67.8 577 18 US 197 66.1 724 10 US	-225-066A-1	equence 1,
230 77.2 748 18 US 230 77.2 748 22 US 202 67.8 577 18 US 197 66.1 724 10 US 197 66.1 724 US	-374-780A-	equence 253
230 77.2 748 22 US 202 67.8 577 18 US 197 66.1 724 10 US 197 66.1 724 14 US	12-699B-80	equence 807
202 67.8 577 18 US 197 66.1 724 10 US 197 66.1 724 14 US	0-225-066A-1	equence 1,
1 197 66.1 724 10 US 2 197 66.1 724 14 US	0-424-599-1	equence 115
2 197 66.1 724 14 US	9-533-029-1	equence 15,
	0-278-173-6	equence 63,
197 66.1 724 1	-412-699B-85	equence 85,
197 66.1 1306 17	25-066A-10	equence 1033
71 9081 1.39 261	74-780A-261	equence 2611

Sequence 805, Application US/10412699B; Publication No. US20040045049A1
GENERAL INFORMATION:
APPLICANT: Mendel Biotechnology, Inc.
APPLICANT: Fromm, Michael E.
APPLICANT: Heard, Jacqueline E.
APPLICANT: Riechmann, Jose Luis
APPLICANT: Adam, Luc J.
APPLICANT: Broun, Pierre E.
APPLICANT: Broun, Pierre E.
APPLICANT: Pineda, Omaira Reuber, T. Lynne Keddie, James S. Yu, Guo-Liang APPLICANT:

ALIGNMENTS

```
-10-412-699B-1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331 GATGGTTTTAAATGGAGGAAGTATGGCAAGAAATCTGTCAAAAACAACAACATTAACAAGG 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                   APPLICANT: Pigglin, Marsha L.
APPLICANT: DuBell, Arnold N.
APPLICANT: Creelman, Robert A.
APPLICANT: Buscliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Sherman, Bradley K.
APPLICANT: Sherman, Bradley K.
APPLICANT: Sherman, Bradley K.
APPLICANT: Sherman, Bradley K.
APPLICANTON: POLYNucleotides and Polypeptides in Plants
FILE REFERENCE: MBI-0048CIP
CURRENT APPLICATION NUMBER: US/10/412,699B
CURRENT APPLICATION NUMBER: 09/394,519
RRIOR RILING DATE: 1999-09-13
PRIOR PILING DATE: 2000-01-21
PRIOR APPLICATION NUMBER: 09/506,720
PRIOR APPLICATION NUMBER: 09/533,030
PRIOR PILING DATE: 2000-03-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspGlyPheLysTrpArgLysTyrblyLysSerValLysAsn1leAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-805 (1-585)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451 GACGATGCAGCTTATGTAATTACAACATATGAAGGAGTCCAT 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              585
0 0 0
0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12391, Application US/10425114
Publication No. US20040034888A1
GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Arabidopsis thaliana
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.25e-35
298.00
100.00%
100.00%
Samaha, Raymond R.
Pilgrim, Marsha L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: G1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-425-114-12391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-412-699B-805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
APPLICANT: Screen, Steven B
APPLICANT: Tabaska, Jack B
APPLICANT: Tabaska, Jack B
APPLICANT: Tabaska, Jack B
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REPERBUCE: 38-21(53313) B
CURRENT APPLICATION NUMBER: US/10/425,114
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 12391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106 GACGGATTCAAGTGGAGGAAGTACGGGAAGAAGGCCGTCAAGAACAGCCCCAAATCCAAGG 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnfyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Creelman, Robert A.
APPLICANT: Creelman, Probert A.
APPLICANT: Dubell, Arnold N.
APPLICANT: Batcliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Kumimoto, Roderick
APPLICANT: Sherman, Bradley K.
TITLE OF INVENTION: Polynucleotides and Polypeptides in Plants
TILE REPRENCE: MBI-0048CIP
CURRENT APPLICATION NUMBER: US/10/412,699B
CURRENT FILING DATE: 2003-04-10
PRIOR APPLICATION NUMBER: 09/394,519
PRIOR APPLICATION NUMBER: 09/489,376
PRIOR APPLICATION NUMBER: 09/489,376
PRIOR APPLICATION NUMBER: 09/898,376
PRIOR APPLICATION NUMBER: 09/898,376
PRIOR FILING DATE: 2000-01-21
SPRIOR FILING DATE: 2000-02-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-666-642-194_COPY_111_164 (1-54) x US-10-425-114-12391 (1-641)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  226 GACGACCCCGGTACGTCATCACCACCACGACGCGTCCAC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Clone ID: 701174191_FLI
US-10-425-114-12391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 1614, Application US/10412699B
; Publication No. US20040045049A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Mendel Biotechnology, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang, James
Fromm, Michael B.
Feard, Jacqueline B.
Riechmann, Jose Luis
Adam, Luc J.
Broun, Pierre B.
Pineda, Omaira
Reuber, T. Lynne
Keddie, James S.
Yu, Guo-Liang
Jiang, Cai-Zhong
Samaha, Raymond R.
Pilgim, Marcha L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.02e-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249.00
88.89%
81.48%
83.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Zea mays
```

```
; Sequence 1531, Application US/10374780A; Publication No. US20040019927A1
                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Zea mays
            US-10-767-701-11768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-374-780A-1531
                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other Molecules Associated With
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          441 GACGGATTCAAGTGGAAGTACGGGAAGAAGAGCCGTCAAGAACAGCCCAAAGTCCAAGG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 AspGlyPheLysTrpArgLysTyrGlyLysLysLysLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
PRIOR APPLICATION NUMBER: 09/533,030
PRIOR FILING DATE: 2000-03-22
PRIOR PLING DATE: 2000-03-22
PRIOR PLING DATE: 0000-03-22
PRIOR PLING DATE: 2000-03-22
PRIOR PLING DATE: 2001-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-767-701-11768

Sequence 11768, Application US/10767701

Sequence 11768, Application US/10767701

Sequence 11768, Application US/10767701

GENERAL INFORMATION:

APPLICANT: Kovalic, David K.

APPLICANT: Cao, Yongwei

TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement

FILE REFERENCE: 38-21(5353)

CURRENT FILING DATE: 2004-01-29

NUMBER OF SEQ ID NOS: 63128

SEQ ID NO 11768

LENGTH: 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-1614 (1-823)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             561 GACGACCCCGCTACGTCATCACCACCTACGACGGCGTCCAC 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
OTHER INFORMATION: Clone ID: SORBI-28MAY03-CLUS16930_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME/KEY: misc feature
LOCATION: (802)
.; CTHER INFORMATION: n is a, c, g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.84e-27
249.00
88.89%
81.48%
83.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
LOCATION: (9)...(9)
OTHER INFORMATION: n is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . No. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
```

```
APPLICANT: La Rosa, Thomas J.
APPLICANT: Evocalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Con, Yongwell
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
TITLE OF INVENTION: 138-21 [3322] B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
CURRENT FILING DATE: 2003-04-28
SEQ ID NO 73408
LENGTH: 1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391 GATGGATTCAAATGGAGGAAGTATGGGAAGAAGGCTGTCAAGAACAGCCCAAATCCAAAGG
                                                                                                                                                                                                                                                                                                                     473 gacegatricaagregaggaagraceggaagaagecegrcaagaacageceaaareceaage 532
                                                                                                                                                                                                    1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                             21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x US-10-425-115-73408 (1-1039)
                                                                                                                                                     US-10-666-642-194_COPY_111_164 (1-54) x US-10-767-701-11768 (1-880)
                                                                                                                                                                                                                                                                                                                                                                                                              511 GACGACCCCCGCTACGTCATCACCACCTACGACGCGCTCCAC 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                    41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Clone ID: MRT4577_166948C.1
US-10-425-115-73408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-425-115-73408
; Sequence 73408, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.89e-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249.00
88.89%
81.48%
83.56%
                       249.00
88.89%
81.48%
83.56%
```

```
Mendel Biotechnology, Inc.
                                                                              Zhang, James
Fromm, Michael B.
Heard, Jacqueline B.
Riechmann, Jose Luis
Adam, Luc J.
Broun, Pierre B.
Pineda, Omaira
Reuber, T. Lynne
Keddie, James S.
Yu, Guo-Liang
Jiang, Cai-Zhong
Samaha, Raymond R.
Pilgrim, Marsha L.
No. US20040045049A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-412-699B-1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1078 GACGGATTCAAGTGGAGGAAGAAGAAGGCCGTCAAGAACAGCCCAAATCCAAGG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1138 AACTACCGCTGCTGCTCGTCGGGGCTGCGGCGTGAAGAGCGGGTGGAGGGACCGC 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 AspGlyPheLySTrpArgLysTyrClyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Predicted polypeptide sequence is orthologous to G1275 US-10-374-780A-1531
                               Ricen.

Ricen.

Hang, Gate.
Heard, Jacque.
Heard, Jacque.
Heard, Jacque.

T. Raccliffe, Ollyer
AT: Raccliffe, Ollyer
AT: Raccliffe, Ollyer
AT: Reddie, James
AT: Reddie, James
AT: Reddie, James
AT: Reddie, James
AT: Broun, Pilerre E
CANT: Pilorim, Marsha L
[CANT: Pilorim, Marsha L
LCANT: Plueda, Omaira
LIE REFERENCE: MBI-O017 CIF
LIE REFERENCE: MBI-O017 CIF
ARRENT APPLICATION NUMBER: US/11/374,780A
FRING APPLICATION NUMBER: 00/310,847
PRIOR FILING DATE: 2001-06-22
PRIOR FILING DATE: 2001-01-19
PRIOR FILING DATE: 2001-06-22
PRIOR FILING DATE: 2001-06-22
PRIOR FILING DATE: 2001-01-19
PRIOR FILING DATE: 2001-06-22
PRIOR FILING DATE: 2001-06-22
PRIOR PAPLICATION NUMBER: 00/336,049
PRIOR PAPLICATION NUMBER: 00/336,049
PRIOR PAPLICATION NUMBER: 00/336,049
PRIOR PAPLICATION NUMBER: 00/326,067
PRIOR APPLICATION NUMBER: 10/171,468
PRIOR APPLICATION NUMBER: 10/225,066
PRIOR APPLICATION NUMBER: 10/225,067
PRIOR APPLICATION NUMBER: 10/225,066
PRIOR PRIOR PRIOR 2002-06-09
PRIOR PRIOR APPLICATION NUMBER: 10/225,066
PRIOR PRIOR PRIOR 2002-06-09
PRIOR PRIOR PRIOR 2002-06-09
PRIOR PRIOR 2002-06-09
PRIOR PRIOR 2002-06-09
PRIOR PRIOR 2002-06-09
PRIOR PRIOR PRIOR 2002-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-666-642-194_COPY_111_164 (1-54) x US-10-374-780A-1531 (1-1663)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1198 GACGACCCCGCTACGTCATCACCACCTACGACGCGTCCAC 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
US-10-412-699B-1621
; Sequence 1621, Application US/10412699B
                    Sherman, Bradley K
Riechmann, Jose Luis
Jiang, Cai-Zhong
Heard, Jacqueline E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7.35e-27
249.00
88.89$
81.48$
83.56$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
```

```
1138 AACTACTACCGCTGCTCGTCGGAGGGCTGCGGCTGGAGGAGGGGGGTGGAGGGGGGCCC 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1078 GACGGATTCAAGTGGAGGAAGTACGGGAAGAAGAGGCCGTCAAGAACAGCCCCAAATCCAAGG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 AsnIyrIyrLygCysSerSerGluGlyCysSerValLysLygArgValGluArgAspGly 40
APPLICANT: Pilgrim, marsna u.
APPLICANT: Creelman, Robert A.
APPLICANT: Creelman, Robert A.
APPLICANT: Discoliffe, Oliver
APPLICANT: Raccliffe, Oliver
APPLICANT: Raccliffe, Oliver
APPLICANT: Raccliffe, Oliver
APPLICANT: Kumimoto, Roderick
APPLICANT: Sherman, Bradley K.
TILE OF INVENTION: Polynuclectides and Polypeptides in Plants
FILE REFERENCE: MBI-0046CIP
CURRENT APPLICATION NUMBER: US/10/412,699B
CURRENT APPLICATION NUMBER: 09/394,519
PRIOR PLING DATE: 2000-01-21
PRIOR PLING DATE: 2000-01-21
PRIOR PLING DATE: 2000-01-22
PRIOR PLING DATE: 2000-03-22
PRIOR APPLICATION NUMBER: 09/513,994
PRIOR PLING DATE: 2001-03-27
PRIOR APPLICATION NUMBER: 09/713,994
PRIOR PLING DATE: 2001-03-27
PRIOR APPLICATION NUMBER: 09/713,994
PRIOR PLING DATE: 2001-03-27
PLING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             - See File Wrapper or PALM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-1621 (1-1663)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.35e-27
249.00
88.89%
81.48%
83.56%
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , ORGANISM: Zea mays
US-10-412-699B-1612
                                                                                                                                                                                                                                                                                      US-10-412-699B-1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                 a
                                                                                                                                         ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57 GACGCTACAAGTGGAAGGAAGTACGCCAAGAAGTCCCGTCCAAGAACAGCCCCCAACCCCAAGG 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Creelman, Robert A. APPLICANT: Creelman, Robert A. APPLICANT: Creelman, Robert A. APPLICANT: DuBell, Arnold N. APPLICANT: Butcliffe, Oliver APPLICANT: Kunimoto, Roderick APPLICANT: Sherman, Bradley K. TITLE OF INVENTION: Polymucleotides and Polypeptides in Plants FILE REPRENCE: MBI-0048CH: 09/304.519
FILE REPRENCE: MBI-0048CH: 09/304.519
FRIOR APPLICATION NUMBER: US/10/412,699B
CURRENT PILING DATE: 2000-01.21
FRIOR APPLICATION NUMBER: 09/489,376
FRIOR APPLICATION NUMBER: 09/533,030
FRIOR APPLICATION NUMBER: 09/533,030
FRIOR PILING DATE: 2000-03-22
FRIOR APPLICATION NUMBER: 09/533,030
FRIOR PILING DATE: 2000-03-22
FRIOR APPLICATION NUMBER: 09/533,029
FRIOR APPLICATION NUMBER: 09/533,029
FRIOR PILING DATE: 2000-03-22
FRIOR APPLICATION NUMBER: 09/533,648
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR PILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR PILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-23
FRIOR FILING 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-1613 (1-680)
1198 GACGACCCCCGCTACGTCATCACCACCTACGACGGCGTCCAC 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                  S-10-412-699B-1613
Sequence 1613, Application US/10412699B
Bublication No. US20040045049A1
GENERAL INFORMATION:
APPLICANT: Mendel Biotechnology, Inc.
APPLICANT: Zhang, James
                                                                                                                                                                                                                                                         Zhang, James
Fromm, Michael E.
Heard, Jacqueline E.
Riechmann, Jose Luis
Adam, Luc J.
                                                                                                                                                                                                                                                                                                                                                                                             Broun, Pierre E.
Pineda, Omaira
Reuber, T. Lynne
Keddie, James S.
Yu, Guo-Liang
Jiang, Cai-Zhong
Samaha, Raymond R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pilgrim, Marsha L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.1e-27
248.00
92.59%
77.78%
83.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2еа шаув
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-412-699B-1613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                          RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                   음
```

```
FILE REFERENCE: MBI-OGHGCTP
CURRENT APPLICATION NUMBER: 09/394,519
FURIOR PEDICATION NUMBER: 09/394,519
FRIOR PEDICATION NUMBER: 09/494,519
FRIOR PELING DATE: 1999-09-13
FRIOR PELING DATE: 2000-01-21
FRIOR PELING DATE: 2000-01-21
FRIOR PELING DATE: 2000-02-17
FRIOR PELING DATE: 2000-02-17
FRIOR PELING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2000-03-22
FRIOR FILING DATE: 2001-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Creelman, Robert A.
APPLICANT: DBBell, Arnold N.
APPLICANT: Ratcliffe, Oliver
APPLICANT: Kumimoto, Roderick
APPLICANT: Khmimoto, Roderick
TITLE OF INVENTION: Polynucleotides and Polypeptides in Plants
FILE REFERENCE: MBI-0048CIP
                                                                                                                                                                                           177 GACGACCCCAGCTACGTGACGACGTACGAGGGATGCAC 218
                                                                                                                                               41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          743
42
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                     Sequence 1612, Application US/10412699B
Publication No. US20040045049A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Mendel Biotechnology, Inc. APPLICANT: Zhang. James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhang, James
Fromm, Michael E.
Heard, Jacqueline E.
Riechmann, Jose Luis
Adam, Luc J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pineda, Omaira
Reuber, T. Lynne
Keddie, James S.
Yu, Guo-Liang
Jiang, Cai-Zhong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Samaha, Raymond R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pilgrim, Marsha L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Broun, Pierre E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248.00
92.59%
77.78%
83.22%
```

ò g ò d à 셤

```
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement PILE REPRENCE: 38-216322131 CURRENT APPLICATION NUMBER: US/10/437,963 CURRENT FILING DATE: 2003-05-14 NUMBER OF SEQ ID NOS: 204966 SEQ ID NOS: 204966 LENGTH: 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10354, Application US/10425114

Sequence 10354, Application US/10425114

Publication No. US20040034888A1

SEQUENCE TO SET TO S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-666-642-194_COPY_111_164 (1-54) x US-10-425-114-10354 (1-952)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-666-642-194_COPY_111_164 (1-54) x US-10-437-963-63714 (1-666)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      526 GACGACCCGAGCTACGTGGTGGTGACGACGTACGAGGGGACGCAC 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  952
45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     666
42
7
7
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Clone ID: PAT_MRT4530_6492C.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Clone ID: 700905693_FLI
US-10-425-114-10354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.26e-27
247.00
90.74%
77.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.92e-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247.00
90.74%
83.33%
82.89%
                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                  US-10-437-963-63714
                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
No..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3169, Application US/10425115
Publication No. US20040214272A1
GRNERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Zhou, Yihua
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT PILLING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 93169
                                                                                                                                                                                                                                                                78 AACTACTACCGGTGCTCGACGGAGGGTGCAAACGTGAAGAAGCGGGTGGAGGGGGGACAAG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57 GACGGCTACAAGTGGAGGAAGTACGGCAAGAAGTCCGTCAAGAACAGCCCCAACCCAAGG 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21 AsnīvrīvrīvsCysSerSerGluGlyCysSerVallysLysArgValGluArgAspGly 40
                                                                                                                                                                 77
                                                                                                                                                                                                                             21 AsnīvrīvrīvrīvscysSerSerGluGlyCysSerValivssvsArgValGluArgAspGly 40
                                                                                                        AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnalleAsnLysArg 20
                                                                                                                                           18 GACGGCTACAAGTGGAGGAAGTACGGCAAGAAGTCCGTCAAGAACAGCCCCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AspGlyPheLysTxpArglysTyrGlyLysSerValLysAsnAsnIleAsnLysArg
                                            US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-1612 (1-743)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-666-642-194_COPY_111_164 (1-54) x US-10-425-115-93169 (1-802)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177 GACGACCCCAGCTACGTGGTGACGACGTACGAGGGATGCAC 218
                                                                                                                                                                                                                                                                                                                                                                                         138 GACGACCCCCAGCTACGTGGTGACGACGACGTACGAGGGGATGCAC 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                      41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808
808
807
000
000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; CTHER INFORMATION: Clone ID: MRT4577_184958C.1 US-10-425-115-93169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 63714, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; APPLICANT: Boukharov, Andrey A.
; APPLICANT: Buckharov, Andrey A.
; APPLICANT: Buckharov, Andrey A.
; APPLICANT: Li, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.88e-27
248.00
92.59%
77.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-10-437-963-63714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-425-115-93169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
```

ò g à 셤 ò 셤 20

```
APPLICANT: La Rosa, Thomas J.
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522 AACTACTACAAATGTTCAAGTGGAGGATGCAGTGAAGAAAAGGGTGGAAAGGGATAGA 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                APPLICANT: Creelman, Robert A.
APPLICANT: Creelman, Arnold N.
APPLICANT: Batcliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Sherman, Bradley K.
TITLE OF INVENTION: Polynucleotides and Polypeptides in Plants
FILE REPERMENT BY 10048GLP
CURRENT APPLICATION NUMBER: 09/394,519
FRIOR APPLICATION NUMBER: 09/489,376
FRIOR APPLICATION NUMBER: 09/489,376
FRIOR APPLICATION NUMBER: 09/506,720
FRIOR APPLICATION NUMBER: 09/503,030
FRIOR PILING DATE: 2000-02-17
FRIOR PELING DATE: 2000-03-22
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2000-11-16
FRIOR APPLICATION NUMBER: 09/513,648
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2000-11-16
FRIOR PELING DATE: 2001-03-22
FRIOR PELING DATE: 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-666-642-194_COPY_111_164 (1-54) x US-10-412-699B-1609 (1-974)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          462 GATGACTACAGCTACGTGATAACAACATATGAAGGTGTGCAC 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 74300, Application US/10425115; Publication No. US20040214272A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 38-21 (53222) B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247.00
90.74%
83.33%
82.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-412-699B-1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-425-115-74300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                              Sequence 11591/, Application US/10424599

Publication No. US20040031072A1

GENERAL INFORMATION:
APPLICANT:
APPLICANT:
Cao Yongwei
TITLE OF INVENTION:
FILE SEPREMENTS:
38-21(53233)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE:
2003-04-28
NUMBER OF SEQ ID NOS: 285684
EENGTH: 974

LENGTH: 974
                                                                                   376 GATGGATACAAGTGGAGGAAGTACGGCAAGAAGTCCGTGAAGAGCAGTCCCAATCTAAGG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       393 GATGGATACAAGTGGAGGAAGTACGGCAAGAAGTCCGTGAAGAGCAGTCCCAATCTAAGG 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         453 AACTACTACAAATGTTCAAGTGGAGGATGCAGTGTGAAGAAAAAGGGTGGAAAGGGATAGA 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                     21 AsnfyrfyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54) x US-10-424-599-115917 (1-974)
                                                                                                                                                                                                     496 GATGACTACAGCTACGTGATAACAACATGTATGAAGGTGTGCAC 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                513 GATGACTACAGCTACGTGATAACAACATATGAAGGTGTGCAC 554
                                                                                                                                                                    41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Clone ID: PAT_MRT3847_75684C.1
US-10-424-599-115917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1609, Application US/10412699B Publication No. US20040045049A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Mendel Biotechnology, Inc.
APPLICANT: Zhang, James
APPLICANT: Fromm, Michael E.
APPLICANT: Heard, Jacqueline E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Riechmann, Jose Luis
Adam, Luc J.
Broun, Pierre E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.13e-27
247.00
90.74%
83.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pineda, Omaira
Reuber, T. Lynne
Keddie, James S.
Yu, Guo-Liang
Jiang, Cai-Zhong
Samaha, Raymond R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-412-699B-1609/c
                                                                                                                                                                                                                                                                                   RESULT 13
US-10-424-599-115917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                     ò
                                                                                                           셤
                                                                                                                                                                 ò
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

```
; CURRENT APPLICATION NUMBER: US/10/425,115
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 74300
; LENGTH: S80
; TYPE: DNA
; ORCANISM: Zea mays
; FRATURE:
; COTHER INFORMATION: Clone ID: MRT4577_167760C.1
US-10-425-115-74300
Alignment Scores: 1e-26 Length: 580
Alignment Scores: 244.00 Matches: 43
Pred. No.: 244.00 Matches: 6
Query Match: 89.89$
COBSETVATIVE: 5
Best Local Similarity: 88.89$
Query Match: 20
Best Local Similarity: 79.63$
Bush Indels: 0
DB: 20
US-10-666-642-194_COPY_111_164 (1-54) x US-10-425-115-74300 (1-580)
```

8 8

8 6 8 6

41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54

Search completed: August 26, 2005, 05:03:58 Job time : 527 secs

Title: Perfect score:

Sequence:

OM protein

Run on:

Scoring table:

Total number

Searched:

```
Sequence 1531, Ap Sequence 1531, Ap Sequence 1504, Ap Sequence 1309, Ap Sequence 1389, Ap Sequence 1318, Ap Sequence 1318, Ap Sequence 1269, Ap Sequence 1269, Ap Sequence 177, App Sequence 117, App Sequence 117, Appi Sequence 1248, Ap Sequence 1248, Ap Sequence 1248, Appi Sequence 1, Appii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 AspGlyPheLysTrpArgLysTyrGlyLysLysExvalLysAsnAsnIleAsnLysArg 20
           487, Ap
                                                                                                                                                                                                                                                                             Sequence 16724,
                                                                                                                                                                                                                                                                                         Sequence 3
Sequence 3
Sequence 3
                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1204 (1-352)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1204, Application US/09640211A
Sequence 1204, Application US/09640211A
Sequence 1204, Marion
GENERAL INFORMATION:
APPLICANT: Wood, Marion
APPLICANT: McGrath, Annette
APPLICANT: Glenn, Matthew
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFRENCE: 11000-102.CIU
CURRENT APPLICATION NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 2368
SOFTWARE: PSESEG for Windows Version 4.0
SEQ ID NO 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-949-016-16724
US-09-949-016-16928
US-09-949-016-16929
US-09-949-016-16931
US-09-949-016-14341
US-09-949-016-14341
US-09-949-016-14341
US-09-949-016-14344
US-09-949-016-14345
US-09-949-016-14345
US-09-949-016-14345
US-09-949-016-14345
US-09-533-029-89
US-09-640-211A-1487
US-09-640-211A-1531
US-09-640-211A-1531
US-09-640-211A-1504
US-09-640-211A-1309
US-09-640-211A-1498
US-09-640-211A-1358
US-09-640-211A-1358
US-09-640-211A-1358
US-09-640-211A-1368
US-09-640-211A-1238
US-09-640-211A-1238
US-09-640-211A-1269
US-09-640-211A-1269
US-09-533-029-17
US-09-540-211A-1269
US-09-533-029-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                 US-08-916-421B-1
US-09-692-570-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.51e-28
242.00
85.19%
79.63%
81.21%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Eucalyptus grandis
 524032
524032
524032
524032
529885
                                                                                                                                                                                                                                                                             138693
                                                                                                                                                                                                                                                                                                                                                                          529885
                                                                                                                                                                                                                                                                                                                                                                                                      529885
                                                                                                                                                                                                                                                                                                                                                                                          529885
                                                                                                                                                                                                                                                                                                                                                                                                                   529885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
  JS-09-640-211A-1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-640-211A-1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                             127.5
123.5
120.5
                                                                                                                                                     117
116.5
112.5
104
103.5
88.5
                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
    υ
                                                                                                                                                                                                                                        υ
                                                                                                                                                                                                                                                                                υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                              Command line parameters:
-MODBL=frame+ p2n. model -DEV=xlh
-MODBL=frame+ p2n. model -DEV=xlh
-MODBL=frame+ p2n. model -DEV=xlh
-MODBL=frame+ p2n. model -DEV=xlh
-UGPCD21/USPTO spool/US1066642/runat_25082005_130054_24882/app_query.fasta_1.199
-DB=Issued_Patents NA -QFNT=fastap -SUFFIX=rni -MINNATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -GTRAT=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN-0 -ALIGN=15
-USRB=US1066642_CGCR 1 1 177_Grunat_25082005_130054_24882 -NCPU=6 -ICPU=3
-NO MANP -LARGEQUERY -NGG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DBV TIMEOUT=120 -WARN TIMEOUT=30 -TRIREADS=1 -XGAPOP=10 -KGAPEXT=0.5 -FCAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELDEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1204, Ap
Sequence 29, Appl
Sequence 116, Appl
Sequence 116, App
Sequence 1849, Ap
Sequence 1841, Ap
Sequence 1519, Ap
Sequence 1519, Ap
Sequence 27, Appl
Sequence 27, Appl
Sequence 1580, Appl
                                                                                              August 25, 2005, 23:29:33 ; Search time 140 Seconds (without alignments) 631.135 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                    298
1 DGFKWRKYGKKSVKNINKR.....RVERDGDDAAYVITTYEGVH
                                                                                                                                                                                                                                                                                                                       2405568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Issued Patents NA:*
1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                      - nucleic search, using frame plus p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-640-211A-1204
US-09-533-029-29
US-09-533-029-15
US-09-640-211A-1406
US-09-640-211A-1849
US-09-640-211A-1849
US-09-640-211A-129
US-09-533-029-7
US-09-533-029-7
US-09-533-029-7
US-09-640-211A-1580
                                                                                                                                                                                                                                                                                                                       of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                            1202784 segs, 818138359 residues
                                                                                                                                                     US-10-666-642-194_COPY_111_164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                          0.5
7.0
7.0
                                                                                                                                                                                                                        Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match Length DB
                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
230
191
191
191
187
165
158
158
158
158
```

Database :

Result

Omaira

```
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397 GACGGGTTCAAGTGGAAAGTATGGGAAGAAGATGGTGAAGAACAGCCCCACATCCAAGA 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-666-642-194_COPY_111_164 (1-54) x US-09-533-029-29 (1-748)
                                                                                                  517 GATGATCCGAGCTTTGTGATAACAACTTACGAGGGTTCCCAC 558
                                                                             41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Heard, Jacqueline
APPLICANT: Ricchmann, Dose-Luis
APPLICANT: Ricchmann, Dose-Luis
APPLICANT: Reddie, James
APPLICANT: Samaha, Luc
APPLICANT: Samaha, Luc
APPLICANT: Samaha, James
APPLICANT: Samaha, James
APPLICANT: Samaha, James
APPLICANT: Tang, James
APPLICANT: Tang, James
APPLICANT: Talong, James
APPLICANT: Pilgrim, Marsha
APPLICANT: Samaha, 124000
CURRENT APPLICATION NUMBER: 60/125,814
EARLIER FILING DATE: 1999-03-23
NUMBER OF SEQ ID NOS: 121
SSCTUMARE: Patentin Ver: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-533-029-15
Sequence 15, Application US/09533029
Patent No. 6664446
GRNERAL INFORMATION:
APPLICANT: Heard, Jacqueline
APPLICANT: Broun, Pierre
APPLICANT: Ricchmann, Jose-Luis
APPLICANT: Ricchmann, Jose-Luis
APPLICANT: Keddie, James
                                                                                                                                                                                                   Sequence 29, Application US/09533029; Patent No. 6664446; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.28e-25
230.00
85.19%
75.93%
77.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: G1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-533-029-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                g
                                                                               ઠ
                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
263 GATGGATACAGGTGGAGGAAGTACGGCCAAAAAGCAGTCCAATCCATTCCCCAGG 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 AspGlyPheLysTrpArglyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54) x US-09-533-029-15 (1-724)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
US-09-640-211A-1406
is Sequence 1406, Application US/09640211A
is Patent No. 6833446
is GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Wood, Maxion
APPLICANT: McGrath, Annette
it APPLICANT: Glenn, Matthew
it TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFERENCE: 11000.1021U10
CURRENT APPLICATION NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 2368
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1406
ILENGTH: 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
APPLICANT: Adam, Luc
APPLICANT: Samaha, Raymond
APPLICANT: Samaha, Raymond
APPLICANT: Tahang, James
APPLICANT: Tahang, James
APPLICANT: Pilgrim, Marsha
APPLICANT: Pilgrim, Marsha
APPLICANT: Pilgrim, Marsha
APPLICANT: Jiang, Cai-Zhong
APPLICANT: Pilgrim, Marsha
APPLICANT: Marsha
APPLICANT: Dissass-Induced Polynucleotides
ITITLE OF INVENTION: DISEASE-INDUCED POLYNUCLEOTIDES
FILE REFERENCE: MADINER: US/09/533,029
CURRENT APPLICATION NUMBER: 60/125,814
EARLIER PILING DATE: 1999-03-23
NUMBER OF SEQ ID NOS: 121
SOFTWARE: Patentin Ver. 2.1
LENGTH: 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               471
33
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        724
33
10
11
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.34e-20
197.00
79.63%
61.11%
66.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.05e-20
191.00
77.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Eucalyptus grandis
US-09-640-211A-1406
                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: G179
US-09-533-029-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM:
```

```
Patent No. 6833446
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-640-211A-1841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-640-211A-1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-640-211A-1841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
No..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233 GATGGCTACAAATGGAGGAAGTACGGCCAGAAAGTGGTCAAGAACAGCCTCCACCCCAGA 292
                                                                                                                                                                                                                                                                                                                                                  20 ArgAsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                                                                                                                                  1 AspGlyPheLysTrpArglysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                            21 AsnīyrīyrīvsCysSerSerGluGlyCysSerVallysLysLysArgValGluArgAspGly 40
                                                                                                                         US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1406 (1-471)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-666-642-194_COPY_111_164 (1-54) x US-09-533-029-116 (1-878)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     747 GGTGACGATGCAGCTTATGTAATTACAACATATGAAGGAGTCCAT 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40 GlyAspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           353 GAAGATTGTCGGATGGTGATAACGACCTACGAGGGCAGACAT 394
                                                                                                                                                                                                                                                                                                                                                                                                                                  41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INPORTATION:
APPLICANT: Heard, Jacqueline
APPLICANT: Heard, Jacqueline
APPLICANT: Broun, Pierre
APPLICANT: Reddie, James
APPLICANT: Reddie, James
APPLICANT: Samaha, Raymond
APPLICANT: Samaha, Raymond
APPLICANT: Samaha, Raymond
APPLICANT: Abang, James
APPLICANT: Abang, James
APPLICANT: Jang, James
APPLICANT: Jang, James
APPLICANT: Pilgrim, Marsha
APPLICANT: Williff, Oliver
APPLICANT: Pilgrim, Marsha
APPLICANT: Williff, Oliver
APPLICANT: Williff, Oliver
APPLICANT: Uscaber, Lynne
APPLICANT: Uscaber, Lynne
APPLICANT: Williff, Oliver
APPLICANT: Williff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            878
35
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-640-211A-1849
; Sequence 1849, Application US/09640211A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-533-029-116
; Sequence 116, Application US/09533029
; Patent No. 6664446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.45e-19
191.00
100.00%
100.00%
64.09%
   61.11%
64.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: G1274
US-09-533-029-116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
US-09-640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                         ઠે
```

```
214 GATGGCTATAGATGGCGCAAATATGGCCAAAAGGCTGTCAAAAACAGCCCTTTCCCCAGG 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 AsnīvrīvrivsCvsSerSerGluGlyCvsSerValivsLvsArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1849 (1-527)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1841 (1-378)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Wood, Marion
APPLICANT: Shenk, Michael A.
APPLICANT: Shenk, Michael A.
APPLICANT: McGrath, Annette
APPLICANT: Glenn, Matthew
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFERENCE: 11000.1021CIN
CURRENT APPLICATION NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 2268
SOFTWARE: FastSEQ for Mindows Version 4.0
SEQ ID NO 1841
LENGTH: 378
APPLICANT: Words.
APPLICANT: Shenk, Michael A.
APPLICANT: Shenk, Michael A.
APPLICANT: McGrath, Annette
APPLICANT: McGrath, Annette
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFERENCE: 11000.1021IJA
CURRENT APPLICATION NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 2368
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1849
LENGTH: 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
33
7
7
0
0
                                                                                                                                                                                                                                                                                                                                                                     527
33
10
11
0
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1841, Application US/09640211A
Patent No. 6833446
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.81e-19
187.00
74.07%
61.11%
62.75%
                                                                                                                                                                                                                                                                                                                                                                                      190.00
79.63%
61.11%
63.76%
                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Pinus radiata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Pinus radiata
                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
```

```
Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
  ID NO 1219
                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                               Sequence 4059, Application US/09313294A
Patent No. 6476212
GENERAL INFORMATION:
APPLICANT: Lalgudi, Raghunath V.
APPLICANT: Lalgudi, Raghunath V.
APPLICANT: Ito, Laura Y.
APPLICANT: Sherman, Bradley K.
TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN EAR FILE REFERENCE: PL-0017 US
CURRENT APPLICATION NUMBER: US/09/313,294A
CURRENT PILIOR DATE: 1999-05-14
NUMBER OF SEQ ID NOS: 7600
SOFTWARE: PERL PROGram
SEQ ID NO 4059
LENGTH: 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97 GATGGGTATCGTTGGCGCAAATATGGGCAGAAAGTAGTGAAAGGAAATCCCAACCCACGG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152 AGTTACTATAAATGCACAAATGCTGGATGTCCAGTGAGGAAACATGTGGAAAGAGCATCA 211
  20
                                                                                21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 AsnīyrīyriyaCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-666-642-194_COPY_111_164 (1-54) x US-09-313-294A-4059 (1-306)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1219, Application US/09640211A

Patent No. 6833446

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Woch Maxion
APPLICANT: McGrath, Annette
APPLICANT: McGrath, Annette
APPLICANT: Genn, Matthew
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFERENCE: 11000.1021C1U
CURRENT APPLICATION NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 2368
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                        212 CATGATCCAAAAGCGGTGATCACAACATATGAAGGAAAGCAT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      217 CATGACCC-GAATCGGTGATCACAACATATGAAGGAAAACAT 257
                                                                                                                                                                   41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               // NAME/KEY: misc_feature
// OTHER INFORMATION: Incyte ID No. 6476212 700347613H1
US-09-313-294A-4059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165.00
74.07%
61.11%
55.37%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                         US-09-313-294A-4059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-640-211A-1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                  ద
                                                                                ò
                                                                                                                     g
                                                                                                                                                                à
                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
1 AspGlyPheLysTrpArgLysTyrGlyLysLysSsrValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                  79
                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                        US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1509 (1-296)
                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1219 (1-162)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1509, Application US/09640211A

Sequence 1509, Application US/09640211A

Batent No. 6833446

GENERAL INPORMATION:

APPLICANT: Wood, Marinon

APPLICANT: Shenk, Michael A.

APPLICANT: Glenn, Matchew

TITLE OF INVENTION: Compositions and Methods for the
FILE REFERENCE: 11000.1021C1U

FILE REFERENCE: 11000.1021C1U

CURRENT APPLICATION UNMERR: US/09/640,211A

CURRENT APPLICATION UNMER: 2000-08-16

NUMBER OF SEQ ID NOS: 2368

SOFTWARE: PEASESEQ for Windows Version 4.0

EMBOTH: 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200 GAAGATCCGAGAGCCTTTATAAACAACATATGAGGGAAAACAT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                               162
28
7
12
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          296
30
8
15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                     140 CATGACCTTAAGTCAGTAATT 160
                                                                                                                                                                                                                                                                                                                                                                                     41 AspAspAlaAlaTyrValile 47
                                                                                             1.49e-15
158.00
74.47%
59.57%
53.02%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.13e-15
157.50
70.37%
55.56%
52.85%
LENGTH: 162
TYPE: DNA
ORGANISM: Eucalyptus grandis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Eucalyptus grandis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                     Best Local Similarity:
                                                  US-09-640-211A-1219
                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-09-640-211A-1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-640-211A-1509
```

us-10-666-642-194_copy_111_164.rni

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-533-029-89
                                          TYPE: DNA
                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                          Мо.:
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614 GCTTACTTCAAATGTGCTTGTGCTCCAAGCTGTCTAAAAAGAAGGTTCAGAGAAGT 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 ABITYTYTYKLYBCYSSer---SerGluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTHER INFORMATION: "n" bases at various positions throughout the CTHER INFORMATION: sequence may be A, T, C, G, other or unknown US-09-533-029-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x US-09-533-029-27 (1-1130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40 GlyAspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-640-211A-1580
; Sequence 1580, Application US/09640211A
; Patent No. 6833446
; GENERAL INFORMATION:
; APPLICANT: Shenk, Michael A.
; APPLICANT: Shenk, Annette
; APPLICANT: Glenn, Matthew
; TITLE OF INVENTION: Compositions and Methods for the
; TITLE OF INVENTION: Modification of Gene Transcription
; TITLE REFERENCE: 11000.1021C1U
; CURRENT APPLICATION WUMBER: US/09/640,211A
; NUMBER OF SEQ ID NOS: 2368
                                                  APPLICANT: Heard, Dacqueline
APPLICANT: Heard, Dacqueline
APPLICANT: Riechmann, Dose-Luis
APPLICANT: Riechmann, Dose-Luis
APPLICANT: Reddie, James
APPLICANT: Pineda, Omaira
APPLICANT: Adam, Luc
APPLICANT: Samaha, Raymond
APPLICANT: Sanag, James
APPLICANT: Tanag, James
APPLICANT: Yu, Guo-Liang
APPLICANT: Yu, Guo-Liang
APPLICANT: Nouber, Lynne
APPLICANT: Reuber, Lynne
TILE OF INVENTION: DISEASE-INDUCED POLYNUCLEOTIDES
FILE REPERENCE: Mair -010
CURRENT APPLICATION NUMBER: US/09/533,029
CURRENT FILING DATE: 1999-03-23
EARLIER APPLICATION NUMBER: 60/125,814
EARLIER FILING DATE: 1999-03-23
SEQ ID NO 2: 121
SEQ ID NO 2: 121
SEQ ID NO 2: 2.1
SEQ ID NO 2: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
Sequence 27, Application US/09533029
Patent No. 6664446
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7.77e-14
154.50
74.55$
47.27$
51.85$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
OTHER INFORMATION: G291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
332 GGCTATTACAAATGCAGCACAGTGAGAGGTTGCCCTGCAAGAAGCACGTAGAACGCGCC 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 AsnīvrīvrivscysSerSer---GluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "n" bases at various positions throughout the sequence may be A, T, C, G, other or unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1580 (1-561)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392 crecaccarceaacerarrearreraacarareaceceaacac 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40 GlyAspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Broun, Pierre
APPLICANT: Broun, Pierre
APPLICANT: Broun, Pierre
APPLICANT: Riechmann, Jose-Luis
APPLICANT: Riechmann, Jose-Luis
APPLICANT: Pineda, Omaira
APPLICANT: Pineda, Omaira
APPLICANT: Samaha, Raymond
APPLICANT: Samaha, Raymond
APPLICANT: Ratcliffe, Oliver
APPLICANT: Algang, Janes
APPLICANT: Ratcliffe, Oliver
APPLICANT: Ratcliffe, Oliver
APPLICANT: Reuber, Lynne
APPLICANT: Reu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
11
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1580
LENGTH: 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 89, Application US/09533029; Patent No. 6664446; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.8e-13
                                                                                                                                                                                                                                                                                                                                                                   153.50
65.45%
52.73%
51.51%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151.50
70.91%
50.91%
50.84%
                                                                                                                                                                       ; ORGANISM: Pinus radiata
US-09-640-211A-1580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: G186
                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTHER INFORMATION:
COTHER INFORMATION:
US-09-533-029-89
```

ø

```
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                 1036 GATGGATGTCAATGGAGAAAATATGGCCAGAAGATGGCCAAAGGGAATCCTTGTCCGCGG 1095
                                                                                                                                                                                                                                                      1096 GCATATTACCGCTGCACGATGGCCACGGGCTGTCCCGTTCGCAAACAAGTTCAACGTTGC 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     146 GATGGACACCAGTGGAGGAAGTATGGACAAAAGATCACCAGGGACAACCCTTGTCCCAGA 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          206 GCTTACTTCAAATGCGCTCACGCTCCCAAGCTGCCTTGTCAAGAAGAAGAAGTGCAAAGAAGT 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 AsnīvrīvrīvsCysSer---SerGluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                       AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                21 AsnTyrTyrLysCysSer---SerGluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-666-642-194_COPY_111_164 (1-54) x US-09-640-211A-1487 (1-319)
US-10-666-642-194 COPY 111 164 (1-54) x US-09-533-029-89 (1-1952)
                                                                                                                                                                                                                                                                                                                                                                                                      266 GCTGAAGACCAATCGGTCATAGTTGCGACTTATGAAGGCGAGCAC 310
                                                                                                                                                                                                                                                                                                                                                                40 GlyAspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1487, Application US/09640211A
Sequence 1487, Application US/09640211A
Setent No. 683446
GENERAL INFORMATION:
APPLICANT: Wood, Maichael A.
APPLICANT: Shenk, Michael A.
APPLICANT: Glenn, Matthew
TITLE OF INVENTION: Compositions and Methods for the
TITLE OF INVENTION: Modification of Gene Transcription
FILE REFERENCE: 11000.1021CU
CURRENT APPLICANTON NUMBER: US/09/640,211A
CURRENT FILING DATE: 2000-08-16
NUMBER OF ESC ID NOS: 2368
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1447
LEAGLE CONTROLLED TO THE CONTROLLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40 GlyAspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319
25
13
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 59, Application US/09533029
Patent No. 666446
GENERAL INFORMATION:
APPLICANT: Heard, Jacqueline
APPLICANT: Broun, Pierre
APPLICANT: Keddie, James
APPLICANT: Keddie, James
APPLICANT: Adam, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.12e-13
145.50
69.09%
45.45%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Eucalyptus grandis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-640-211A-1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-640-211A-1487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
US-09-533-029-59
                                                                       ٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
8
                                                                                                                                    g
                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                    ò
                                                                                                                                                                                                                ò
```

```
1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21 AsnTyrTyrLysCysSer---SerGluGlyCysSerValLysLysArgValGluArgAsp 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-666-642-194_COPY_111_164 (1-54) x US-09-533-029-59 (1-1651)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369 GCGGAGGATACAACTATCTTGACAACAACGTACGAAGGAAACCAT 913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40 GlyAspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
           APPLICANT: Seuber, Lynne
APPLICANT: Reuber, Lynne
APPLICANT: Reuber, Lynne
TITLE OF INVENTION: DISEASE-INDUCED POLYNUCLEOTIDES
TITLE OF INVENTION: DISEASE-INDUCED POLYNUCLEOTIDES
FILE REPERENCE: MBI-010
CURRENT APPLICATION NUMBER: US/09/533,029
CURRENT FILING DATE: 2000-03-22
EARLIER APPLICATION NUMBER: 60/125,814
EARLIER FILING DATE: 1999-03-23
NUMBER: OF SEQ ID NOS: 121
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 59
LENGTH: 1651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: August 26, 2005, 01:48:30 Job time : 149 secs
                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.13e-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145.50
67.27%
49.09%
48.83%
APPLICANT: Pilgrim, Marsha APPLICANT: Jiang, Cai-Zhong
                                                                                                                                                                                                                                                                                                                                                           , OTHER INFORMATION: G1417
US-09-533-029-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                  .gnment Scores:
```

```
AF426252 585 bp mRNA linear PLN 08-NOV-2001
Arabidopsis thaliana WRKY transcription factor 51 (WRKY51) mRNA,
                                         AR439815 Sequence
AF456251 Arabidops
AK118457 Arabidops
AR439808 Sequence
AF42397 Arabidops
AY01124 Arabidops
AY01124 Arabidops
AY01124 Arabidops
AY063112 Oryza sat
AX5698 Sequence
AX652016 Sequence
AX652016 Sequence
AX652018 Arabidops
AY18319 Arabidops
AY185318 Arabidops
AY185318 Arabidops
AY185318 Arabidops
AY185318 Arabidops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicacese; Arabidopsis.
                                                                                                                                                                                                                             AP003492 Oryza sat
AY071849 Arabidops
AK069091 Oryza sat
AY341858 Oryza sat
AY341859 Oryza sat
                                                                                                                                                                                                                                                                                                                                         AK065518 Oryza sat
AB026890 Nicotiana
AB063576 Nicotiana
AF404857 Arabidops
                                                                                                                                                                                                                                                                          AX653470 Sequence
AF459793 Oryza Bat
D30038 Ipomoea bat
AK103745 Oryza Bat
                          Oryza sat
Arabidops
                                                                                                                                                                                                                                                                                                                          gat
                                                                                                                                                                                                            L44134 Cucumis sat
AP003341 Oryza sat
                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                               Oryza
                                                                                                                                                                                                                                                                                                                         AK062027 Oryza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mushair,S., Ulker,B. and Somssich,I.E.

Nushnir,S., Ulker,B. and Somssich,I.E.

Submitted (02-OCT-2001) Biochemistry, Max-Planck-Institut fur
Zuchtungsforschung, Carl-von-Linne-Weg 10, Koeln, NRW D-50829,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .585
/organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="teaxon:3702"
/chromosome="vv"
/clone="BAC MXK3"
/tissue_type="inflorescence"
/ecotype="Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                 ALIGNMENTS
                                                                                                                   AC097112
AX506986
AX652016
BT008482
                                                                                                                                                                         AY114650
AY062720
AY045813
AY136318
CUSSLDB
AP003341
AP003492
                                                                                                                                                                                                                                                                          AX653470
AF459793
IPBSPF1P
                                                                                                                                                                                                                                                                                                      AK103745
AK065078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AF426252.1 GI:16798361
                                                                                                147704
147704
1182
1182
1182
1182
                                                                                                                                                                                                                                                 1046
                                                                                                                                                                                                                                                                  1276
                                                                                                                                                                                                                                                                                     1847
1993
2191
2764
1287
1953
2373
2373
657
                                                                                                                                                               1213
1264
1453
1462
1606
                                                                                                                                                                                                                       129402
158084
                                                                                                                                                                                                                                                                                                                                                                                                                                                     complete cds.
AF426252
                                   Germany
source
                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
AF426252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
AF426252 Arabidops
AK109578 Oryza sat
AK066252 Oryza sat
AY341854 Oryza sat
                                                              August 25, 2005, 19:45:28 ; Search time 2856 Seconds (without alignments) 916.170 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                   1 DGFKWRKYGKKSVKNNINKR.....RVBRDGDDAAYVITTYEGVH
         GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                            nucleic search, using frame_plus_p2n model
                                                                                                                                                                                            4708233 segs, 24227607955 residues
                                                                                                                                                                                                             of hits satisfying chosen parameters:
                                                                                                  US-10-666-642-194_COPY_111_164
298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                               0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF426252
AK109578
AK066252
AY341854
                                                                                                                                 BLOSUM62
Xgapop 10.0 , Xgapext (
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ∞ ∞ ∞ ∞
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                 90 ba: *
90 btg: *
90 btg: *
90 ba: *
90 ba: *
90 bt: *
90 bt: *
90 bt: *
90 bt: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           585
707
792
839
                                                                                                                                                                                                                                                                                                Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0
81.2
81.2
81.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9:
10:
11:
                                                                                                   Title:
Perfect score:
                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                              Total number
                                             OM protein
                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                    Sequence:
                                                                                                                                                                                             Searched:
                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
```

```
US-10-666-642-194_COPY_111_164 (1-54) x AK109578 (1-707)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rice.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agrobiological Sciences Rice Full-Length cDNA Project Team.,
Kikuchi, S., Satoh,K., Nagata,T., Kawagashira,N., Doi,K.,
Kishimoto,N., Yazaki,J., Ishikawa,M., Yamada,H., Ooka,H., Hotta,I.,
Kojima,K., Namiki,T., Onheda,E., Yahagi,W., Suzuki,K., Li,C.,
Ohtsuki,K., Shishiki,T., Foundation of Advancement of International
Science Genome Sequencing & Analysis Group:, Otomo,Y., Murakami,K.,
Iida,Y., Sugano,S., Fujimura,T., Suzuki,Y., Tsunoda,Y.,
Kurosski,T., Kodama,T., Masuda,H., Kobayashi,M., Xie,Q., Lu,M.,
Narikawa,R., Sugiyama,A., Mizuno,K., Yokomizo,S., Niikura,J.,
Ikeda,R., Ishibiki,J., Kawamata,M., Yoshimura,A., Miura,J.,
Kusumegi,T., Oka,M., Ryu,R., Ueda,M., Matsubara,K., RIKEN:,
Kawai,J., Carninci,P., Adachi,J., Alzawa,K., Arakawa,T., Fukuda,S.,
Hara,A., Hashidume,W., Hayateu,N., Imoteni,K., Ishii,Y., Itoh,M.,
Saito,R., Sasaki,D., Sato,K., Shibata,K., Shinagawa,A., Shiraki,T.,
Yoshino,M. and Hayashizaki,Y.
                                                                                                                                           /translation="MNISQNPSPNFTYFSDENFINPFMDNNDFSNLMFFPDIDEGGNNG
INTEREISSPT91VSSBTFFSTSESGGGSGATTLSKKESTRNGSKESDQTKETGHRVAFRT
RSKIDVMDDGFFWRYKGKKSVKONINKNYYKCSSEGCSVKKRVERDGDDAAYVITTY
EGVHNHESLGSNVYXNEMVLSYDHDNMVQHSLIRS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    707 bp mRNA linear PLN 24-JUL-2003
Oryza sativa (japonica cultivar-group) cDNA clone:002-135-F06, full
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLI_CDNA; oligo capping.

Oryza sativa (japonica cultivar-group)

Oryza sativa (japonica cultivar-group)

Eukaryota; Viridiplantes; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331 GATGGTTTTAAATGGAGGAAGTATGGCAAGAATCTGTCAAAAACAACATTAACAAGAGG 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysSerVallysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 AsnIyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The Rice Full-Length cDNA Consortium, National Institute of
                                     /gene="WRKY51"
/codon_start=1
/product="WRKY transcription factor 51"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 ASPASPAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                               585
0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54) x AF426252 (1-585)
                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Science 301 (5631), 376-379 (2003)
                                                                                                   /protein_id="AAL29429.1"
/db_xref="GI:16798362"
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
/gene="WRKY51"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AK109578.1 GI:32994787
                                                                                                                                                                                                                                                                                               1.07e-30
                                                                                                                                                                                                                                                                                                                298.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 707)
                      1. .585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aponica rice
                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22752273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12869764
                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   451
                                                                                                                                                                                                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                            ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AK109578
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
```

```
Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Doi, K., Fujimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizune, W., Hayashida, K., Hayashizaki, Y., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hori, F., Hotta, I., Iida, Y., Ikeda, R., Imamura, K., Imahibiki, J., Ishiikawa, M., Itoh, M., Kagawa, I., Kanagawa, S., Kathi, Kawai, J., Kawai, J., Kawai, J., Kawamata, M., Kikuchi, S., Kishikawa, Hirozane, T., Kishimoto, N., Kobayashi, M., Kodama, T., Kojima, K., Kojima, Y., Kondo, S., Komno, H., Kouda, M., Koya, S., Kuriara, C., Kurosaki, T., Miura, J., Miyazaki, M., Masuda, H., Matsubara, K., Matsuyama, T., Miura, J., Miyazaki, A., Mizuno, K., Murata, M., Nagata, T., Nakamura, M., Namiki, T., Narikawa, R., Nikura, J., Nishi, K., Noka, M., Ooka, H., Obato, M., Ota, Y., Otomo, Y., Ryu, R., Saltoh, H., Sakai, C., Sakai, K., Sakai, M., Sakai, C., Sakai, K., Shinasaki, R., Suzuki, Y., Taqami, M., Taqami, Takeda, Y., Suzuki, Y., Taqami, M., Taqami, Takeda, Y., Taqawa, A., Takahashi, F., Takaku-Yahira, S., Tanaka, T., Tomaru, A., Toya, T., Tamanoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamamoco, M.

FAIS Genome Sequencing & Analysis Group: Otomo, Y., Tida, Y.,

Rujimura, T., Ikeda, R., Ishibiki, J., Kawamata, M., Kobayashi, M.,

Rodama, T., Kursomeji, T., Liu, M., Mura, J.,

Mizuno, K., Marikawa, R., Niikura, J., Oka, M., Kyu, R., Sugano, S.,

Sugiyama, A., Suzuki, Y., Tsunoda, Y., Ueda, M., Xie, Q., Yokomizo, S.,

Yoshimura, A., Matsubara, K. and Murakami, K.

Genome Exploration Research Group in Riken: Adachi, J., Aizawa, K.,

Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hangawi, K.,

Hara, A., Hashizume, W., Hayashida, K., Hayatsu, M., Hiramoto, K.,

Hiraoka, T., Hori, F., Iida, J., Imamura, K., Imotani, K., Ishii, Y.,

Itoh, M., Kagwa, I., Kanagawa, S., Katoh, H., Kawai, J.,

Kishikawa-Hirozane, T., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,

Roya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,

Nakamura, M., Nishik, K., Nomura, K., Shinagawa, A., Shiraki, T.,

Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T.,

Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K.,

Yasunishi, A., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       URL: http://cdna01.dna.affrc.go.jp/cDNA/
NIAS Rice Pull-Length cDNA Project Team: Kikuchi,S., Satoh,K.,
Nagata,T., Kawagashira,N., Doi,K., Kishimoto,N., Yazaki,J.,
Ishikawa,M., Yamada,H., Ooka,H., Hotta,I., Kojima,K., Namiki,T.,
Ohneda,E., Yahagi,W., Suzuki,K., Li,C., Ohtsuki,K., Shishiki,T. and
Yamamoto,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshimura, A. Direct Submission Submitte of Agrobiological Sciences, Department of Molecular Genetice, Head of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki 205-802. 'Japan (E-mail:skivuchi@mias.affrc.go.jp, Tel.81-29-838-7007, Fax:81-29-838-7007, Pax:81-29-838-7007, Pax:81-29-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Oryza sativa (japonica cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            707
41
7
6
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/cultivar="Nipponbare"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:39947"
/clone="002-135-F06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.7e-23
242.00
88.89%
75.93%
81.21%
```

용

8 ò

요 ઠે

```
Yamamoco, M.

Fals Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y.,

Rujimura, T., Ikeda, R., Ishibiki, J., Kawamata, M., Kobayashi, M.,

Rodama, T., Kursawaki, T., Kusumegi, T., Lu, M., Mirza, J.,

Mizuno, K., Marikawa, R., Miikura, J., Oka, M., Kyu, R., Sugano, S.,

Sugiyama, A., Suzuki, Y., Tsunoda, Y., Ueda, M., Xie, O., Yokomizo, S.,

Yoshimura, A., Matsubara, K. and Murakami, K.

Genome Exploration Research Group in Riken: Adachi, J., Aizawa, K.,

Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hanagaki, T.,

Hara, A., Hashizume, W., Hayashida, K., Hayatsu, M., Hiramoto, K.,

Hiraoka, T., Hori, F., Iida, J., Imamura, K., Imotani, K., Ishii, Y.,

Itoh, M., Kagwa, I., Kanagawa, S., Katch, H., Kawai, J.,

Kishikawa-Hirozane, T., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,

Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,

Nakamura, M., Nishi, K., Nomura, K., Shinagawa, A., Shiraki, T.,

Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T.,

Zakaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K.,

Yasunishi, A., and Hayashizaki, Y.
                                                                                                                                                                                                          URL: http://cdna01.dna.affrc.go.jp/cDNA/
NIAS Rice Full-Length cDNA Project Team: Kikuchi, S., Satch, K.,
Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J.,
Ishikawa, M., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T.,
Ohneda, E., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T. and
Yamamoto, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLN 13-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki 3105-8602, Japan (E-mail:sklkuchi@mias.affrc.go.jp, Ts. 181-29-838-7007, Fax:81-29-838-7007, Fax:81-29-838-7007 This clone is one of the 28K full-length cDNA clones from japonica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryza sativa (japonica cultivar-group)
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AY341854 839 bp mRNA linear PLN 13-AUG-200
Oryza sativa (japonica cultivar-group) WRKY13 mRNA, complete cds.
AY341854
Agrobiological Sciences, Department of Molecular Genetics, Head or Thorstory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Oryza sativa (japonica cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                792
7 7 7 5 5 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x AK066252 (1-792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryza sativa (japonica cultívar-group)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="J013052M10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:33519195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.36e-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242.00
90.74%
77.78%
81.21%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AY341854.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY341854
                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Rice Full-Length cDNA Consortium, National Institute of Agrobiological Sciences Rice Full-Length cDNA Project Team:, Kikuchis, S., Satoh,K., Nagata,T., Kawagashira,N., Doi,K., Kishimoto,N., Yazaki,J., Ishikawa,M., Yamada,H., Ooka,H., Hotta,I., Kojima,K., Namiki,T., Ohneda,E., Yahagi,W., Suzuki,K., Li,C., Ohtsuki,K., Shimiki,T., Foundation of Advancement of International Science Genome Sequencing & Analysis Group:, Otomo,Y., Murakami,K., Iida,Y., Sugano,S., Fujimura,T., Suzuki,Y., Tsunoda,Y., Murakami,K., Iida,Y., Sugano,S., Fujimura,T., Suzuki,Y., Tsunoda,Y., Murakami,K., Iida,Y., Sugano,S., Yajimura,T., Kobayashi,M., Xie,Q., Lu,M., Narikwaa,R., Sugiyama,A., Mazuno,K., Yokomizo,S., Niikura,J., Ikeda,R., Ishibiki,J., Kawamata,M., Yoshimura,A., Mura,J., Kawai,J., Carninci,P., Adachi,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashidume,W., Hayata,W., Mimotani,K., Ishii,Y., Ich,M., Kagawa,I., Kondo,S., Konno,H., Miyazaki,A., Sato,N., Ota,Y., Yoshino,M. and Hayashizaki,Y. Sato,K., Shinagawa,A., Shiraki,T., Yoshino,M. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           La (Jakes 1 to ')'''''' Akimura, T., Arakawa, T., Carninci, P., Doi, K., Pujimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, W., Fujimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, W., Fujimura, T., Fukuda, S., Hanagaki, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Horta, I., Iida, J., Iida, Y., Ikeda, R., Imamura, K., Horta, I., Ishibiki, J., Ishili, Y., Ishikawa, M., Itoh, M., Kagawa, I., Kanagawa, S., Katoh, H., Kawagashira, N., Kawai, J., Kawamata, M., Kiuchi, S., Kishikawa, Hirozane, T., Kishimoto, N., Kobasa, M., Kojima, Y., Kojima, Y., Kojima, Y., Kojima, Y., Kojima, Y., Kojima, Y., Minta, J., Miyazaki, A., Masuda, H., Marataha, T., Miura, J., Miyazaki, A., Masuda, H., Marata, M., Nagata, T., Ii, C., Lu, M., Namasaki, R., Ohneda, E., Ohno, M., Ohtsuki, K., Nomira, K., Sakai, K., Sakai, C., Sakai, K., Sakai, J., Sasai, J., Satoh, K., Tagami, M., Tagami, Takeda, Y., Tagama, A., Suzuki, K., Satoh, K., Tagami, M., Tagami, Takeda, Y., Tagama, A., Suzuki, K., Satoh, K., Yagami, M., Tagami, Takeda, Y., Tagama, A., Suzuki, K., Satoh, K., Yagami, M., Tagami, Takeda, Y., Tagama, A., Suzuki, K., Satoh, K., Yagami, M., Yawanaka, Y., Tawahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Yamada, H., Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AKU66252 1792 bp mRNA linear PLN 24-JUL-2003 Oryza sativa (japonica cultivar-group) cDNA clone:J013052M10, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AKG66252.1 GI:12976270
PLI CDNA, CAP trapper.
PLI CDNA, CAP trapper.
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Sukaryota, Viridiplantes, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta; Magnoliophyta, Liliopsida, Poales, Poaceae;
Ehrhartoidese, Oryzea, Oryza.
                                                                                    245 GACGGGTTCAAGTGGCGAAAGTACGGGAAGAAGGCGGGTGAAGAGCAGCCGGAGCCGGGG 304
                                                                                                                                                                                                                 40
                                                     20
                                                  AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsntleAsnLysArg
                                                                                                                                                                               21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (05-DEC-2001) Shoshi Kikuchi, National Institute of
                                                                                                                                                                                                                                                                                                        Science 301 (5631), 376-379 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK066252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22752273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK066252
                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
```

```
/clone="P0510F03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon start=1
                                                                                                                                                                                                                             12447438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                             MEDLINE
                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                    /protein id="MAQ20913.1"
/db_xref="GI:33519196"
/db_xref="GI:33519196"
/translation="MAASIGLCHETSYAYSYPASNTSSSLCFPPLMADHIVDGGGGGG CSFGFLELGHSVYSIPLPPPSQPVVVAGGNNDQYGVSSSSSAAATTSRIGFRTRSE VEVLDDGFKWRKYGRAVKSSPNPRNYYRCSAAGCGVKRKVERDGDDFRYVYTYDGY HNHATPGCVGGGGHLPYPTSAAPPWSVPAAAASPPPAHAQAWGAPLHAAAAAHSSESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza sativa (japonica cultivar-group) genomic DNA, chromosome 1, APOC2486 BA000010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              448 AACTACTACGGTGCTCGGCGGGGGGGGGCGTCAAGAAGCGGGTGGACGCGCGACGGC 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Orýza sativa (japonica cultivar-group)
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sasaki,T., Matsumoto,T., Yamamoto,K., Sakata,K., Baba,T.,
Katayose,Y., Wu,J., Niimura,Y., Cheng,Z., Nagamura,Y.,
Antonio,B.A., Kanamori,H., Hosokawa,S., Masukawa,M., Arikawa,K.,
Chiden,Y., Hayashi,M., Okamoto,M., Ando,T., Aoki,H., Arita,K.,
Hamada,M., Harada,C., Hijishita,S., Honda,M., Ichikawa,Y.,
Idonuma,A., Iijima,M., Ikeda,M., Ikeno,M., Ito,S., Ito,T., Ito,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 388 GACGGGTTCAAGTGGCGAAAGTACGGGAAGAAGCGCGTGAAGAGGAGCCCCGAACCCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 AsnTyrTyrLysCysSerGerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                                           /organism="Oryza sativa (japonica cultivar-group)"
/mol_type="mRNA"
/db_xref="taxon:39947"
                                                Yao,Q., Peng,R. and Xiong,A.
Isolation of rice WRKY protein through W-box bait vector by modified yeast one-hybrid system method
Unpublished
                                                                                                                              2 (bases 1 to 839)
Yao, Q., Peng, R. and Xiong, A.
Direct Submission
Submitted (14-JUL-2003) Bio-tech Center, Shanghai Academy Agricultural Science, Beidi Road 2901, Shanghai, Shanghai 021-201106, China
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  508 GACGACCGCGCTACGTCGTCACCACCTACGACGCGTCCAC 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    839
7
7
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-666-642-194_COPY_111_164 (1-54) x AY341854 (1-839)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa (japonica cultivar-group)
                                                                                                                                                                                                                                                                                                                                                                 note="transcription factor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                    Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                     codon_start=1
/product="WRKY13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AP002486.1 GI:8468048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,73e-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242.00
88.89%
75.93%
81.21%
                Ehrhartoideae, Oryz
1 (bases 1 to 839)
                                                                                                                                                                                                                                                                 1. .839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
So
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AP002486/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                      REFERENCE
                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                   PEATURES
                                                                          TITLE
                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
Rivano, H. Watuborghi, M. Kono, I. Machite, K. Matagaira, K. Matagaira, M. Matagaira,
```

S

CDS

```
106654 AACTACTGGTGCTCGGCGGCGGGGTGCGGCTCAAGAAGCGGTGGACGCGACGGC 106595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Orysa sativa (japonica cultivar-group) cDNA clone:002-144-E10, full AK10855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="BAB03357.1"
/db_xref="G1:9558421"
/tanslation="WADYHFVYKOVBGASTEWDDIQRRLGNLPPKPEPFKPPAYAPKV
/translation="WADYHFVYKOVBGASTEWDDIQRRLGNLPPKPEPFKPPAYAPKV
DADBQPKSKEWLDBREBDELEDLEDDLDDDRFLEQYRRWRLABLREAAKAAKFGSIVP
                        LLQTLEPSLAKGNKYMVFCKTLNSSRAVDHFLTENQISTVNYHGEVPAEERVENLNKF
RNEEGDCPTLVCTDLAARGLDLDVDHVIMFDFPSNSIDYLHRTGRTARMGAKGKVTSL
VALKTOVTLAARIEBANKKNESLEALTTNNVRRAAVNPQYTSTKGRPSALKVVNQKGRR
GVALQTKSSRIVKOTTSSRRRSPIRSQPRSKSTSSGKAKPVRSAKFPSKSSSPSVVAK
SRPRPEGRKGDALNKTSSRRRSPIRSQPRSKSTSSGKAKPVRSAKFPSKSSSPSVVAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tränslation="MADDVVASPEESLTALLLEPAASPRDDPSVEVRLYRRGAGPVAV
FRSALVGPRRDRLQVRAIQAEHGLRALFAFKPESSLRGIRIRPGPAAAAGCSAVPFRD
                                                                                                                                                                                                                                                                                                                                                                       /trānslation="MataalkidsDdVVLDASGAGRGDDGDAADNALMRLPRALGAAG
VLTGAMAAAAAVYGSPPAGTVLARGGGMGYYVGLGGAFAAGVAEVWAAMMAGDCPGR
JGPQTVLVTATMTKAVQKLIDEEFEGIVHLRTTTFQKRVATARHDFIKLSGSENKLEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FLI_CDNA; oligo capping.

Oryza sativa (japonica cultivar-group)

Oryza sativa (japonica cultivar-group)

Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    correspond to a region of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                              complement(join(24743. .25093,25121. .25168))
/note="unnamed protein product; hypothetical protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the predicted gene.
Similar to Arabidopsis thaliana DNA chromosome 5,
clone F18022; putative protein (AL163817)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106594 GACGACCGCGCTCTCGTCACCACCTACGACGGCGTCCAC 106553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27117. .27491
/note="unnamed protein product; Similar to
thaliana chromosome 1 BAC F14023; unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x AP002486 (1-149699)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (join (28555. .28715, 29225.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30985. .31226))
/note="unnamed protein product;
AU097577(C62003),C28669(C62003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                          RVVGKRLLCAAVVPFLIVVSLGGFSVHVKN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indel8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                    /proteIn_id="BAB03355.1"
/db_xref="G1:9558419"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon start=1
(protein_id="BAB03356.1"
(db_xref="GI:9558420"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAVIALDGEPKVAQPLASPFLT"
                                                                                                                                                                                                                                                                        start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK108555.1 GI:32993764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.27e-20
242.00
88.89%
75.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AC012654) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK108555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                / KEANTEL TO 1 = "WEGI PREVI EHSLHVKEDAKP I KORLRRPAQDRKDA I KEELTKL
LAAGF I KEYLHPPRLANPYLVRKKTGQMRCYDYTDLMKSCPKDPFGLPRI I DDVVDST
AGCELLS FEUDCYSGYHQI RLKESDCLKTS FT PPFGAYCYVTMPFGLKNAGATYORNIO
AGCELLS FEUDCYSGYHQI RLKESDCLKTS FT PPFGAYCYVTMPFGLKNAGATYORNIO
RCFSTQI GRANVERYODOVVKTKQEDDL I LDLEETPASI RAPEMKLAPPEKCTFGVPSG
KLLGFMVSHRGI QANPEKVTA I LANKEPSTOKOVQKLJTGCMAALSRFVSRTGERGMPF
FKLLKTVDNPGGREBAQKAREDFRKLLITFPPPPLASPTBHOBPLLLYVSTSGYWYGSTLVV
VRSFPLGDI LHNREANGREBAGKARENTRYPOVOKLJYGI I LTTRKLSHYFQCHSVTV
VRSFPLGDI LHNREANGRI RKWALELMSLDI SFRPRI SI KSQALADFVAEWTECQEDT
PARNMEHWTHFFF DGSKRLSGTGAGVUL ISFRPRI SI KSQALADFVAEWTECQEDT
PARNMEHWTHFF DGSKRLSGTGAGVUL I SFRPRI SI KSQALADFVAEWTECQEDT
LAI AI SLGI KKLI VRGDSQLVVNQVMKEWSCLDDNMMAYRQFVRKLEDKFDGLELSHV
LRINNEAADRLANFGSKREARPSDVFVEHLYTPTVPHCDTTQNCGTGFFRDGLELSHV
DINSGI CGWHAAARTI VGKAYRQFFWFTHLYTPTVPHCDTTQNCGTGFFRRQLLK
DITSGI CGWHAAARTI VGKAYRQFFWFTHLYTPTVBSCHQFRKKI TADARBARDFF
INI VHREGVPNR I I TDNGTQFTGEVVENFCEDFGIKI CYASSVAHPPRNGNGQVERANGMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EWRISUPFGLPWAAESYFKTISTESÄSNHÄGEIASSPTTPDRDDGAYPPILMKLPDDD
AAS ITTAPSPERRPROKSASTPISPSPERRIGYLIQPLOTVYSTPOLDOTYSTSPTVDSRP
TRIUWFURESSRYNDPHLDDPGSLDDNYTPLYFGVFWADNETERGRQARETERRRE
ERRILEEEHOAQEGERLRREQGERETAKEAEDRRQRALEAGRRARDLIGQODVEGTP
VERTPOQUANAAITLLDTLKENELUGBUHVNILMOTKTHAASVPWASESIHTPTG
SRVPHFRSHDYRAPELSITGAGSNRRSRGHDERSVHSPPDLIKERRVDRRSESHTPTG
VDLRDTIIQRAAARGYHHSPDRHDDDLDGVAAPTDDLRRVDWPAGFKPTGIEKYDGTT
NDESMILYVGTAIRAAGGISKAMANILVVALADSARSWHJEDRRTGSWAERDHFT
ANFOGTPERPETOLIQUINNU LOKSGESLADY TRRFSEQRWIS SDITDDVIIABFTKGIR
HEELVGKFGRRPPRITVKLMFEKANEYAKAEDAVTASKQSGFSWKFKKDTPASGGGGSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EAPSRHELLIERLEQRHLKGVPAATPRPAQREKGRGGGGGGGGGGGCKRVEVVDSFE
ELGGGEEVWAALGEWGISKPTBIQCVGYPAVLAGTSVVLGSHTGSGKTLAYLLPLVQI
EIENTYRLLPINNGVPANGVFRVAKSISHHARFSTWYGGSRIRPQEDSLAMPVDM
VVGTPGRILDHIKOGNMVYGDIKYLVLDEADTMFDQGFGFDIRKFLAPLKNRAAKPGD
                               /db_xref="G1:9558415"
|/db_xref="G1:9558415"
|/db_xref="G1:9558415"
|/db_xref="G1:9558415" |
|/db_xref="MCFVDKIKSQAQFDVLVGKIKKLEGARDEVANVATPLVQAMFL
|/db_xref="MCFCREALDATEIFFREEDTIDGF
|
| ADGTSEEAALDLISNAQSAADKIASDVVEQFRNNDLQPSNNNSDDERTDSD="Complement (join (7430 . 9665,1,031 . 10325,13198 . 14057) |
| Anote="unnamed protein product; Similar to Oryza salva oyypsy-type retrotransposon RIRE2; GAG-POL precursor -orf2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NHKDRKRKPAELVATASHSSRQRSRVNTPDKIMNSQCPHIPNSNHVAKDCFVYKQFAD
QYAKSTRKNPDEEQSTSRKKDDGDTPAGFQDHRKELNHIFGGPLAYESKRKQKLTERE
INAVQPDTPQYLRWSEIAIKFDRSDHPDRVVHPGRYPLVLDPVVRNVKLRRTLIDGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FESLRFRNFREERYEEDRVDDLHRLEBVREAALIRSARYLQGIRRYHNRNVRSRAFLV
GDLVLRKIQTTRDRHKLSPLWEGPFIISBVTRPGSYRLKREDGTLVDNSWNIEHLRRF
YA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       translation="MLTRPSPLLRLRLRAALATTTTTTAAGASAVTAPTEPETTAR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LQGI KARVFDRLKPYAGKWVQQLPSVLWSLRTTPSRATGQSPFFLVYGAEAMLPSBVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  translation="MGSVSGIDDLVFPPGQTFRFGSLDFVTNNFGKISLIDSELDQSG/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALNILPAKTLDDMQIPRSELKPSNAPFHGVIPGLSATPLGQITLPVTFGTRENFRTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISFEVADFETAYHAILGRPALAKFMAVPHYTYMMMKMPGPRGVLSLRSDIKQAVTCDK
ESCDMAQTREMASAREDIRLAAATASEGEVPATKISKSGEGEAKTKKIPLDPSDPTKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="unnamed protein product; Similar to Oryza sativa
gypsy-type retrotransposon RIRE2; GAG-POL precursor -orf1
(AB030283)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="5' LTR"
complement(join(19560. .19579,19721. .20137,20636. .2068/
20795. .20924,21323. .21465,21147. .21887,22176. .22316,
22406. .22594,223912,23275. .23751)
/note="unmend protein product; EST C25847(C10847)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           corresponds to a region of the predicted gene.
Similar to Arabidopsis thaliana hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .17069)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (17119. .17559)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /proteIn_id="BAB03354.1"
/db_xref="GI:9558418"
                                                                                                                                                                                                                                                                                                                                           protein_id="BAB03352.1"
|db_xref="GI:9558416"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein id="BAB03353.1"
/db_xref="GI:9558417"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (T04020)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (14121.
                                                                                                                                                                                                                                                                                                              'codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     start=1
                                                                                                                                                                                                                                                                        AB030283) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F17A8.80
```

CDS

40

54

CDS

LTR

.29433,30547. .30690,

BAC

to Arabidopsis m protein.

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AY341846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
The Rice Full-Length CDNA Consortium, National Institute of Agrobiological Sciences Rice Full-Length CDNA Project Team:, Kikuchi, S., Satoh, K., Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J., Ishikawa, M., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T., Onneda, E., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T., Foundation of Advancement of International Science Genome Sequencing & Analysis Group:, Otomo, Y., Murakami, K., Iida, Y., Sugano, S., Fujimura, T., Suzuki, Y., Tsunoda, Y., Murakami, K., Kuroaski, T., Kodama, T., Masuda, H., Kobayashi, M., Xie, Q., Lu, M., Narikawa, R., Sugiyama, A., Mizun, K., Yoshimura, A., Mura, J., Kusumegi, T., Oka, M., Ryu, R., Ueda, M., Matsubara, K., RIKEN:, Kawai, J., Carninci, P., Adachi, J., Aizawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashidume, W., Hayatsu, N., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kondo, S., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T., Yoshino, M. and Hayashizaki, Y. Collection, mapping, and annotation of over 28,000 cDNA clones from Agaponica rice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. (Dades 1 to 1129).

Adachi, J., Alzawa, K., Akimura, T., Arakawa, T., Carninci, P., Doi, K., Fuyimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, W., Fujimura, T., Fukuda, S., Hanagaki, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Horta, I. Iida, J., Ishii, Y., Ishikawa, M., Itoh, M., Kagawa, I., Kanagawa, S., Katoh, H., Kawagashira, N., Kawai, J., Kawamata, M., Kinsikawa, Hirozane, T., Kishimoto, N., Kobasa, M., Kojima, K., Kojima, Y., Kodima, T., Kishimoto, N., Kobasa, M., Kojima, Y., Miura, J., Miyazaki, A., Mizuno, K., Murakami, K., Matsuyama, T., Miura, J., Miyazaki, A., Mizuno, K., Murakami, K., Murata, M., Nagata, T., Nakamura, M., Numasaki, R., Ohneda, E., Ohno, M., Ohtsuki, K., Nomira, K., Sakai, K., Sakai, D., Sako, K., Satoh, K., Sakai, C., Sakai, Shinagawa, A., Shiraki, T., Shishiki, T., Sogabe, Y., Sugano, S., Sugano, S., Shinagawa, A., Shiraki, T., Shishiki, T., Sogabe, Y., Sugano, S., Tagawa, A., Takahasahi, F., Tagami, M., Tagami, T., Tomaru, A., Tomaru, A., Toya, T., Tagama, T., Tomaru, A., Yagama, K., Suzuki, K., Xie, Q., Yahagi, W., Yamada, T., Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              URL: http://cdnaol.dna.affrc.go.jp/cDNA/
NIAS Rice Full-Length cDNA Project Team: Kikuchi, S., Satoh, K.,
Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J.,
Ishikawa, M., Yamada, H., Ooka, H., Hotta, I., Kojima, K., Namiki, T.,
Ohneda, E., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T. and
Yamamoto, M.
FAIS Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y.,
Fujimura, T., Kusumegi, T., Lu, M., Masuda, H., Mura, J.,
Kodama, T., Kusumegi, T., Lu, M., Masuda, H., Mura, J.,
Mizuno, K., Narikawa, R., Nikura, J., Oka, M., Ryu, R., Sugano, S.,
Sugiyama, A., Suzuki, Y., Tsunoda, Y., Ueda, M., Xie, O., Yokomizo, S.,
Sugiyama, A., Matsubara, K. and Murakami, K.
Genome Exploration Research Group in Riken: Adachi, J., Aizawa, K.,
Akimura, A., Matsubara, K. and Murakami, K.
Genome Exploration Research Group in Riken: Adachi, J., Aizawa, K.,
Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K.,
Hiraoka, T., Hori, F., Ida, J., Imamura, K., Imotani, K., Ishii, Y.,
Kishikawa-Hirozame, T., Kanagawa, S., Katoh, H., Kawai, J.,
Kishikawa-Hirozame, T., Matsusma, T., Miyazaki, A., Murata, M.,
Koya, S., Kurihara, C., Matsuyama, T., Numasaki, R., Ohno, M., Osato, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
Submitted (27-AUG-2002) Shoshi Kikuchi, National Institute of
Agrobiological Sciences, Department of Molecular Genetics, Head of
Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki
305-8602, Japan (B-mail:skikuchi@nias.affrc.go.jp,
Tel:81-29-838-7007, Pax:81-29-838-7007)
This clone is one of the 28K full-length cDNA clones from japonica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 301 (5631), 376-379 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 1193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yoshimura, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
```

```
/translation="MSSLYPSLLSLSESPAEYRQVGGGRYAGEDVVDDDDDMAAVADA
VSSYLSFDMDDVEYYTPEVGFHSKQHNPPPVAAAPLEAGGGREQSRREAAVNLGKMDR
GPAPVSGGAATGGVPRSKNGSKIAFKTRSEVDVLDDGYRWRKYGKKMYKNSPNPRNYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLN 13-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Bhrhartoideae, Oryzeae, Oryza.

I (bases 1 to 983)
Yao, Q., Peng,R. and Xiong,A.
Isolation of rice WRKY protein through W-box bait vector by
modified yeast one-hybrid system method
Orygan and Modified yeast one-hybrid system method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
Ota,Y., Saitoh,H., Sakai,C., Sakai,K., Sakazume,N., Sano,H., Sasaki,D., Sato,K., Shibata,K., Shinagawa,A., Shizaki,T., Sogabe,Y., Tagami,M., Tagami-Takeda,Y., Tagawa,A., Takahashi,F., Takahara,S., Tanaka,T., Tomaru,A., Toya,T., Waki,K., Yasunishi,A. and Hayshizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY341846 983 bp mRNA linear PLN 13-AUG-20
Oryza sativa (japonica cultivar-group) WRKY5 mRNA, complete cds.
AY341846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shanghai Academy of
                                                                                                                                                    1. .1193
/organism="Oryza sativa (japonica cultivar-group)"
/mol type="MRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="002-144-E10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Oryza sativa (japonica cultivar-group)"
/mb_type="mRNA"
/db_xref="taxon:39947"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yao,Q., Peng,R. and Xiong,A.
Direct Submission
Submitted (14-JUL-2003) Bio-tech Center, Shanghai Academy
Agricultural Science, Beidi Road 2901, Shanghai, Shanghai
021-201106, China
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635 AACGACCGCGCGTACGTGACGATGTACGAGGGATCCAC 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                1193
40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x AK108555 (1-1193)
                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="transcription factor"
/codon_start=1
/product="WRKY5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indel8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /protein_id="AAQ20905.1"
/db_xref="GI:33519180"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AY341846.1 GI:33519179
                                                                                                                                                                                                                                                                                                                                                                                             4.06e-22
237.00
88.89%
74.07%
79.53%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .983
```

Š 요 8 원 ò 셤

```
Mizuno, K., Murakami, K., Murata, M., Nagata, T., Nakamura, M., Manikura, J., Nishi, K., Nomura, K., Namikura, J., Nishi, K., Nomura, K., Numasaki, R., Ohneda, B., Ohno, M., Ohteuki, K., Oka, M., Ooka, H., Osato, N., Ota, Y., Otomo, Y., Ryu, R., Saitoh, H., Sakai, C., Sakai, K., Sakarume, N., Sano, H., Sato, K., Sato, K., Shibara, K., Shinagawa, N., Shiraki, T., Shishiki, T., Soqabe, Y., Suqano, S., Sugiyama, A., Suzuki, K., Suzuki, Y., Tagami, M., Tagami, Takeda, Y., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Teunoda, Y., Udeda, M., Waki, K., Xie, Q., Yahagi, W., Yamada, H., Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.73e - 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 232.00
87.04$
74.07$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77.85%
                                                                                                                                                                                                                                                                                                                      Yoshimura, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The Rice Full-Length cDNA Consortium, National Institute of Agrobiological Sciences Rice Full-Length cDNA Project Team:, Kikuchi, S., Satoh, K., Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J., Ishikawa, M., Yamada, H., Dook, H., Hotta, I., Kojima, K., Namiki, T., Ohneda, E., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T., Foundation of Advancement of International Science Genome Sequencing & Analysis Group: Otomo, Y., Murakami, K., Ida, Y., Sugano, S., Fujimura, T., Suzuki, Y., Tsunoda, Y., Murakami, K., Rurosaki, T., Kodama, T., Masuda, H., Kobayashi, M., Xie, Q., Lu, M., Narikawa, R., Sugiyama, A., Mazuno, K., Yokomizo, S., Niikura, J., Kusumegi, T., Oka, M., Wazuno, K., Yokomizo, S., Niikura, J., Kusumegi, T., Oka, M., Wayu, R., Ueda, M., Yoshimura, A., Muura, J., Kawai, J., Carninci, P., Adachi, J., Aizawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashidume, W., Hayatsu, N., Imchani, K., Ishii, Y., Itoh, M., Kagawa, I., Kondo, S., Konno, H., Miyazaki, A., Osato, N., Ota, Y., Saito, R., Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T., Yoshimo, M. and Hayashizaki, Y. Collection, mapping, and annotation of over 28,000 cDNA clones from japonica rice
RCSSEGCRVKKRVERARDDARFVVTTYDGVHNHPAPLHLRPQLPPPGGYSIAGAPAVV
APHGRLGLEEAEVIALFRGTTATSLLLP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza sativa (japonica cultivar-group) cDNA clone:002-144-B05, full insert sequence.
AK108522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Doi, K., Pujimura, T., Fukuda, S., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayashizaki, Y., Hayateu, N., Hiramoto, K., Hiraoka, T., Hori, F., Hotta, I., Iida, Y., Ikeda, R., Imamura, K., Imotani, K., Ishibiki, J., Ishii, Y., Ishikawa, M., Itoh, M., Kanagawa, S., Katoh, H., Kawagashira, N., Kawai, J., Kawamata, M., Kishikawa, S., Kishikawa-Hirozane, T., Kishimoto, N., Kobayashi, M., Kodama, T., Kojima, K., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Mayasa, S., Kutihara, C., Kurosaki, T., Kusumegi, T., Li, C., Lu, M., Masuda, H., Matsubara, K., Matsuyama, T., Miura, J., Miyazaki, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK108522.1 GI:12993731
CLT, CDNA, oligo capping.
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Eukaryota, Viridiplantea; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451 GACGGCTACCGGTGGAGGAAGTACGGCAAGAAGATGGTCAAGAACAGCCCCCAACCCAAGG 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             511 AACTACTACCGGTGCTCGAGCGAGGGTGCCGCGTGAAGAAGCGGGTGGAGCGCGCCCGG 570
                                                                                                                                                                                                                                                                                                                                                                                                                                        1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x AY341846 (1-983)
                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                    1.53e-21
232.00
87.04%
74.07%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 1091)
                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22752273
                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                           . No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                 Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
AK108522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                ORIGIN
```

```
Fals Genome Sequencing & Analysis Group: Otomo,Y., Iida,Y., Fals Genome Sequencing & Analysis Group: Otomo,Y., Ikeda,R., Ishibiki,J., Kawamata,M., Kobayashi,M., Kodama,T., Kurosaki,T., Kusumegi,T., Lu,M., Marsuba,T., Murza,J., Mizuno,K., Marikawa,R., Niikura,J., Oka,M., Ryu,R., Sugano,S., Sugiyama,A., Suzuki,Y., Tsunoda,Y., Ueda,M., Xie,Q., Yokomizo,S., Yoshimura,A., Matsubara,K. and Murakami,R. Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken: Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hanagaki,T., Hara,A., Hashizume,W., Hayashida,K., Hayasu,N., Haramoto,K., Itch,M., Kagwa,I., Kanagawa,S., Katoh,H., Kawai,J., Konda,M., Koya,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Murata,M., Nishi,K., Nomura,K., Ninyazaki,A., Murata,M., Nishi,K., Nomura,K., Sakazume,N., Nishi,K., Nomura,K., Sakazume,N., Nishi,K., Sakai,K., Sakazume,N., Satoh,K., Shibata,K., Shinagawa,A., Shiraki,T., Tamani,M., Tayami,M., T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rice.
URL.

URJ.

Submitted (27-AUG-2002) Shoshi Kikuchi, National Institute of Submitted (27-AUG-2002) Shoshi Kikuchi, National Institute of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki 305-8602, Japan (B-mail-iskikuchi@mias.affrc.go.jp, Tel:81-29-838-7007, Fax:81-29-838-7007)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  455 GACGGCTACCGGTGGGAAGTACGGCAAGAAGATGGTCAAGAACAGCCCCAACCCAAGG 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Oryza sativa (japonica cultivar-group)"
/mol_type="mRNA"
/mol_type="mRNA"
/db.xre="Nipponbare"
/db.xre="taxon:3997"
/clone="002-144-B05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1091
40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-666-642-194_COPY_111_164 (1-54) x AK108522 (1-1091)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indel8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
```

PAT 20-FEB-2004

```
In (bases I to 748)
Heard, J., Broun, P., Riechmann, J.L., Keddie, J., Pineda, O., Adam, L., Sandaha, R., Zhang, J., Yu, G.-L., Ratcliffe, O., Pilgrim, M., Jiang, C.-Z. and Reuber, L.
Transgenic plants comprising polynucleotides encoding transcription factors that contex disease tolerance part context disease tolerance battent: US 6664446-A 29 IG-DEC-2003;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF426251 444 bp mRNA linear PLN 08-NOV-2001
Arabidopsis thaliana WRKY transcription factor 45 (WRKY45) mRNA,
complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids; II; Brassicales; Brassicaceae; Arabidopsis.

(bases 1 to 444)

Kushnir,S., Ulker,B. and Somssich,I.E.

Submitted (02-0CT-2001) Biochemistry, Max-Planck-Institut fur
Zuchtungsforschung, Carl-von-Linne-Weg 10, Koeln, NRW D-50829,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                                                                                                         748
41
5
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-666-642-194_COPY_111_164 (1-54) x AR439815 (1-748)
                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thaliana'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="BAC F2837"
/tissue_type="inflorescence"
/eccype="Columbia"
/gene="WRKY45"
 AR439815 748 bp | Dequence 29 from patent US 6664446.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana (thale cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Arabidopsis
/mol_type="mRNA"
/db_xref="taxon:3702"
/chromosome="III"
                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                    1. .748
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                    AR439815
AR439815.1 GI:42665780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF426251
AF426251.1 GI:16798359
                                                                                                                                                                                                                                                                                                                                                                                   2.08e-21
230.00
85.19%
75.93%
                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                       Unknown.
                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Germany
                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                           REFERENCE
                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AF426251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="AAL61857.1"
/db_xref="G1:18252117"
/db_xref="G1:18252117"
/translation="MNDADTWIGSSFSDDTHSVFEFPELDLSDEWNDDLVSAVSGMN
OSYGYOTSDTJON="MNDADTWIGSSFSDDTHSVFEFPELDLSDEWNDDLVSAVSGMN
FYTRGSVFVLDDGFKWRKYGKKMVKNSPHPRNYYKCSVDGCFVKKRVERDRDDPSFVI
TTYEGSHNHSSMN"
                                                                                      AY071847 522 bp mRNA linear PLN 20-JAN-2002 Arabidopsis thaliana WRKY transcription factor 50 (WRKY50) mRNA, complete cds.
                                                                                                                                                                                                                               Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots,
rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          340 GACGGGTTCAAGTGGAGAAGTATGGGAAGAAGATGGTGAAGAACAGCCCACATCCAAGA 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 ABITYTTYTLYBCYBSerSerGluGlyCyBSerValLyBLyBArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 522)
Ulker,B., Kushnir,S. and Somssich,I.E.
Direct Submission
Submitted (26-DEC-2001) Biochemistry, Max-Planck-Institut fur
Zuchtungsforschung, Carl-von-Linne-Weg 10, Koeln, NRW D-50829,
                                                                                                                                                                                                                                                                                1 (bases 1 to 522)
Ulker, B., Kushnir, S. and Somssich, I.E.
Arabidopsis thaliana transcription factor WRKY50
GATGATCCGAGCTTTGTGATAACAACTTACGAGGGTTCCCAC 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="WRKY transcription factor 50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522
41
5
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-666-642-194_COPY_111_164 (1-54) x AY071847 (1-522)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. 522
/organism="Arabidopsis thaliana"
/mol_type="mRNA"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="inflorescence"
/ecotype="Columbia"
1. .522
                                                                                                                                                                                            Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /chromosome="V"
/map="BAC clone T19G15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                             AY071847.1 GI:18252116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'gene="WRKY50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene="WRKY50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.37e-21
230.00
85.19%
75.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .522
                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           460
                    575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
AR439815
                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                     RESULT 9
AY071847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
```

ઠે ద ઠે g ò 셤

20

```
fprotein_id="AAM62478.1"
/db_xref="G1:21553385"
/translation="MEDRENDVLFPCSSSVDPRLTEFHGVDNSQPTTSSEEKPRSKK
KKKEREARYAPGTREGOVDILDDGYRWRKYGGKAVKNPFPRSYYKGTEEGGRVKKQVQ
RQWGDEGVVVTTYQGVHTHAVDKPSDNFHHILIQMHIFPPFPCLKE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana At3901970 mRNA linear PLN 14-FEB-2004 transcriptional regulator protein, complete cds, clone:
sequence is considered to be 3'-truncated if it lacks the C-terminal end of the encoded protein. Please note that these CDNA sequences are derived from the Ws or LAer ecotypes and therefore may contain polymorphisms when compared to sequences from Col-0. Genset carried out the library production and sequencing of the full-length clones. Ceres, Inc. carried out the clustering of the 5' sequences, selection of clones, and sequence assembly.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219 GATGGATACAGGTGGAGGAAGTACGGCCAAAAAGCAGTCAAACAACAACAATCCCTTCCCCAGG 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 AsnīyrīyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                     24. .467
/codon_start=1
/product="putative WRKY-like transcriptional regulator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seki, M., Iida, K., Satou, M., Sakurai, T., Akiyama, K., Ishida, J., Nakajima, M., Enju, A., Kamiya, A., Narusaka, M., Carninci, P., Kawai, J., Hayashizaki, Y. and Shinozaki, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (25-NOV-2002) Motoaki Seki, RIKEN Genomic Sciences Center; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seki,M., Iida,K., Satou,M., Sakurai,T., Akiyama,K., Ishida
Nakajima,M., Enju,A., Kamiya,A., Narusaka,M., Carninci,P.,
Kawai,J., Hayashizaki,Y. and Shinozaki,K.
Arabidopsis thaliana full-length cDNA
Published Only in Database (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         339 GGAGACGAAGGAGTGGTGACGACATACCAAGGTGTTCAT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-666-642-194_COPY_111_164 (1-54) x AY085246 (1-548)

    .548
    /organism="Arabidopsis thaliana"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK118457.1 GI:26451945
FLI CDNA; CAP trapper.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:3702"
/clone="1415"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.07e-17
197.00
79.63%
61.11%
66.11%
                                                                                                                                                                                                                                                                                                                                                                                                protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AK118457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aliqnment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . No. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AK118457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
         1. .444

/gene="WRKY45"
/codon_start=1
/product="WRKY transcription factor 45"
/protein_id="AAL29438.1"
/b_xref="G1:16798180"
/translation="WEDRKCDVLPPCSSSVDPRLTEFHGVDNSAQPTTSSEEKPRSKK
KKKEREARYAFQTRSQVDILDDGYRWRKYGQKAVKNNPFPRSYYKCTEEGCRVKKQVQ
RQWGDEGVVVTTYQGVHTHAVDKPSDNFHHILTQWHIFPPFCLKE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
Submitted (11-MAR-2002) Ceres, Inc, 3007 Malibu Canyon Road,
Malibu, CA 90265, USA
This clone sequence is one of 5,000 Ceres full-length cDNAs made
available to TiGR and Genbank. The following quality assessment of
this set was done by comparison with known proteins: two percent of
the clones are estimated to be 5'-truncated, less than one percent
are 3'-truncated, approximately two percent represent alternative
splice variants, including unspliced introns and spliced exons; one
percent may contain prematures stop codons; five percent
frame shifts in a coding region. A sequence is considered to be
5'-truncated if it lacks the translation initiation start (ATG). A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear PLN 14-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256 AGCTATTATAAGTGCACAGAAGAAGATGCAGAGTGAAGAAGCAAGTGCAGAGGCAATGG 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 AspGlyPheLysTrpArgLysTyrGlyLysSerValLysAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brover, V., Troukhan, M., Alexandrov, N., Lu, Y.-P., Flavell, R. and
Feldmann, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 (bases 1 to 548)
Brover, V., Troukhan, M., Alexandrov, N., Lu, Y.-P., Flavell, R. and
Feldmann, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 548)
Haas, B.J., Volfovsky, N., Town, C.D., Troukhan, M., Alexandrov, N., Feldmann, K.A., Flavell, R.B., White, O. and Salzberg, S.L. Full-length messenger RNA sequences greatly improve genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, rosids, eurosids II; Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AYU85246 548 bp mRNA linear PLN
Arabidopsis thaliana clone 1415 mRNA, complete sequence.
AY085246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          444
33
10
11
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x AF426251 (1-444)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pull-Length cDNA from Arabidopsis thaliana
Unpublished
                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Biol. 3 (6), RESEARCH0029 (2002)
                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLI CDNA.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-666-642-194_COPY_111_164 (1-54)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AY085246.1 GI:21403956
                                                                                                                                                                                                                                                                                          3.19e-17
197.00
79.63%
61.11%
66.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 548)
                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12093376
                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                    ..
No...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AY085246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                         ORIGIN
```

셤

δ 셤 ò

δ

셤

548 33 11 0 0

```
Location/Qualifiers
                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Germany
                                                                                                                                                       Percent Similarity
                                                                                                        Scores:
                                                                                                                                                                                          Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                          . No. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                       Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AF442397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fprotein_id="BAC43065.1"
/db_xref="GI:26451946"
/translat.ion="MEDRRCDVLFPCSSSVDPRLTEPHGVDNSAQPTTSSEEKPRSKK
KKKEREARYAFOTRSGVDILDDGTRWRKYGGKAVKNNPFPRSYYKCTEEGCRVKKQVQ
RQWGDEGVVVTTYQGVHTHAVDKPSDNFHHILTQMHIFPPFCLKE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 724)
Heard, J., Broun, P., Riechmann, J.L., Keddie, J., Pineda, O., Adam, L.,
Heard, J., Zhang, J., Yu, G.-L., Ratcliffe, O., Pilgrim, M.,
Jiang, C.-Z. and Reuber, L.
Transgenic plants comprising polynucleotides encoding transcription
factors that confer disease tolerance
factors that confer disease tolerance
Patent: US 6664446-A 15 16-DEC-2003;
                                                                                                        et
                                                  essentially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 20-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 AsnTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnlsAsnLysArg 20
                                             An Arabidopsis full-length cDNA library was constructed essential. as reported previously (Seki et al. (1998) Plant J. 15:707-720, Seki et al. (2002) Science 296:141-145). cDNA cleaved with BamHI and XhoI was ligated to modified Lambda FLC1-E vector (Carninci al. (2001) Genomics 77:79-90) digested with BamHI and SalI. This clone is in a modified pBluescript vector.

Please visit our web site (http://pfgweb.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                     transcriptional regulator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     308 GATGGATACAGGTGGAGGAAGTACGGCCAAAAAGCAGTCAAGAACAATCCATTCCCCAGG
230-0045, Japan (E-mail:mBeki@gsc.riken.go.jp,
URL:http://pfgweb.gsc.riken.go.jp, Tel:81-45-503-9625,
Fax:81-45-503-9586)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             696
110
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x AK118457 (1-696)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                        /organism="Arabidopsis thaliana"
/mol_type="mRNA"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                               /ecotype="Columbia"
/note="common name: thale cress"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   'product="putative WRKY-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 724 bp I
S 6664446.
                                                                                                                                                                                                                                                                                                                                                                gene="At3g01970/F28J7_30"
                                                                                                                                                                                                                                                                                                                                                                                    13. .556
gene="At3g01970/F28J7_30"
                                                                                                                                                                                                                                                                                               clone="RAFL19-70-A15"
                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 15 from patent US
AR439808
                                                                                                                                                                                                                                                                               chromosome="3"
                                                                                                                                                                                                                                                                                                                                                                                                                    codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR439808.1 GI:42665773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.36e-17
197.00
79.63%
61.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein"
                                                                                                                                                                                                      1. .696
                                                                                                                                                                        further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR439808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR439808
                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
```

```
/product="WRKY transcription factor 48"
/protein id="AAL35290.1"
/bx xref="GI:17064166"
/tarnslation="WRKKKEEDHHQQQQQQKEIKNTETXIEQEQEQEQEQESQAS SSSNWANLVTSSDHHPLELAGNLSSIPPYSYFEHSSNNWPNSFLDLLRQDH GASSSNSSESFEAPPLELAGNLSSIPFTDLLRQDH GASSSNSSESFEAPPLELAGNLSSIPFTDLLRQDH GASSSNSSESFEAPPLELAGNLSSIPFTDLLRQDH NATANNNNSGESFEAPPNSFTDLLRCDH NATANNNNSGESFEAPPNSFTDLLRKQUKAKKKNOKKERARFAFLTKSDID NLDDGYRWRKYGQKAVKNOSPEGOGOGGGGTTVQCGGVKKRVERSEDDPSIVWTTYEGQHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana WRKY transcription factor 48 (WRKY48) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Bukaryota; Viridiplantae; Streptophyta; Eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.

1 (bases I to 1200)

1 (bases I to 1200)

1 (bases I to 1200)

1 Arabidopsis thanin, S. and Somssich, I.E.

1 Arabidopsis thanin, S. and Somssich, I.E.
                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                 21 AsnIyrIyrIyysCysSerSerGluGlyCysSerValLysIysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 1200)
Ulker, B., Kushnir, S. and Somssich, I.E.
Direct Submission
Submitted (31-OCT-2001) Biochemistry, Max-Planck-Institut fur
Zuchtungsforschung, Carl-von-Linne-Weg 10, Koeln, NRW D-50829,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             383 GGAGACGAAGGAGTGGTGACGACATACCAAGGTGTTCAT 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                 724
333
10
11
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                        US-10-666-642-194_COPY_111_164 (1-54) x AR439808 (1-724)
                                                                                                                                                                 Conservative:
Mismatches:
Indels:

    1200
    organism="Arabidopsis thaliana"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="inflorescence"
/ecotype="Columbia"
1. .1200
                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arabidopsis thaliana (thale cress)
                    /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:3702"
/chromosome="V"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /map="BAC K6M13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF442397.1 GI:17064165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="WRKY48"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    codon start=1
                                                                                                          5.61e-17
197.00
79.63%
61.11%
66.11%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana
```

HPFPWTPRGHIGMLTSPILDHGATTASSSSFSIPQPRYLLTQHHQPYNWYNNNSLSMI NRRSSDGTFVNPGPSSSFPGFGYDMSQASTSTSSSIRDHGLLQDILPSQIRSDTINTQ TNEENKK"

ORIGIN

Length:
Matches:
Conservative:
Mismatches:
Indels: 1.01e-16 197.00 81.48% 61.11% Percent Similarity: Best Local Similarity: Query Match: DB: Alignment Scores: Pred. No.:

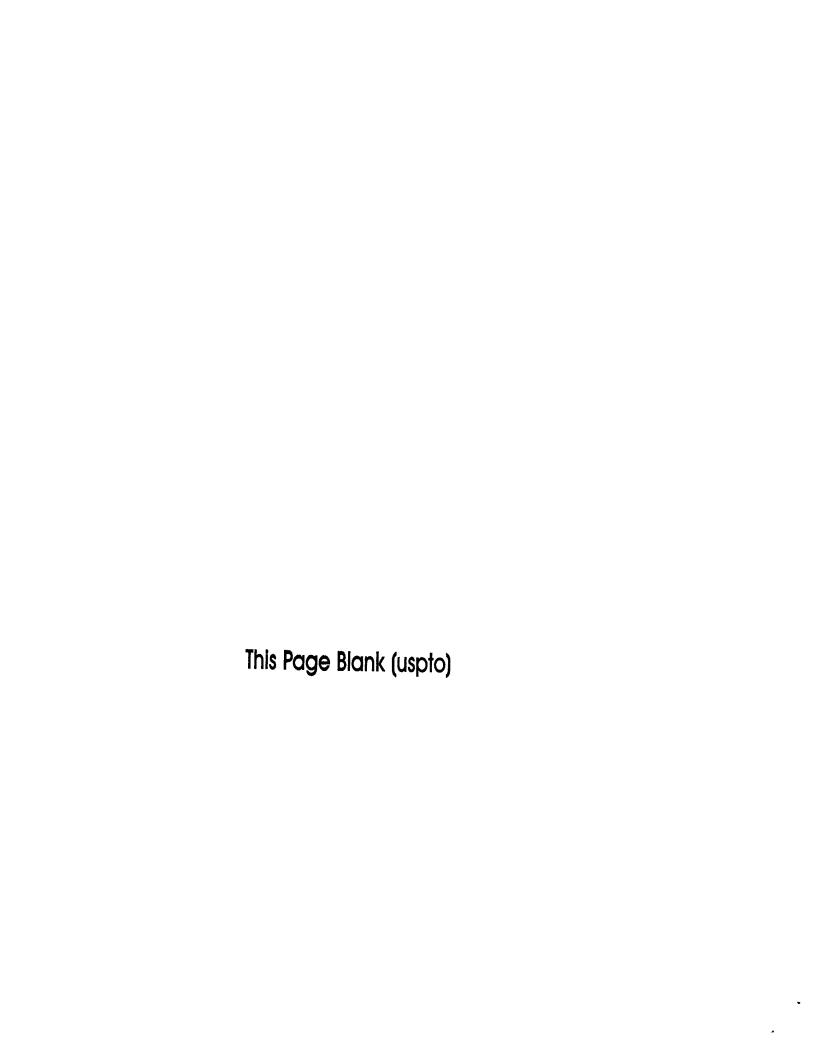
US-10-666-642-194_COPY_111_164 (1-54) x AF442397 (1-1200)

ò 셤

දු පු

ઠે

Search completed: August 26, 2005, 01:06:40 Job time : 2881 secs



Sequence:

Run on:

Searched:

```
62J01 Arabidopsis Leaf Senescence Library Arabidopsis thaliana CDNA 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
I (bases I to 435)
Guo, Y., Cai, Z., and Gan, S.
Transcriptome of Arabidopsis leaf senescence
Plant Cell Environ. 27 (5), 521-549 (2004)
                                                                                                                                                                                                                                                                                   Bap15g03.
OBIFCC021
Bar53a02.
HV CEb000
HPI1H01T
46-57 Ste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GR_Ea14H
GR_Ea14H
N053D02 P
OX1_34_A0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Sushing Gan
Department of Horticulture
Cornell University
Tip Plant Science, Cornell University, Ithaca, NY 14853-5904, USA
Tel: 607 254 5418
Fax: 607 255 0599
EST623254
SEW 126 G
LG1 384 F
OV1 17 D0
HV CED000
                                                                                                                                                                                                                                                                                                                                                                                                             OGE3d01.y
QBH13h10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSI 11 A0
OBIFCC019
99AS81 Ri
SCBFRZ300
FA SEA001
sar66b10.
                                                                                     PIC1 31 H
LG1 344 C
EST624062
                                                                                                                                            MEST136-B
                                                                                                                                                                            WOUND1 73
                                                                                                                                                             EST624061
                                                                                                                                                                                                                                                                   saj84d10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      saq54d08
                                                                                                                                                                                                           8af98d06
                                                                                                                                                                                                                                   saf09h11
                                                                                                                                                                                                                                                  8af36c06
                                                                                     BM328984 BAN565483 BOS16647 BM334368 NBOS16646 CN151030 VCN151116 VB1321739 B1426331 B1892659 BM188076
                                                                                                                                                                                                                                                                                                                                                          CB879922 BG525040 4
BQ987474 (
BQ984602 (
CP002660 (
CD233113 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CL970459 CBE230596 SCA156006 SCO817603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BU577163 E
BQ742659 E
CO093096 C
CO093095 C
CX110138 P
CX110138 P
                                                                                                                                                                                                                                                                                     BQ473633
CL971695
BU578439
BE216105

    .435
    /organism="Arabidopsis thaliana"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/ecotype="Landsberg erecta"
/db xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Std Error:
                                                                                     BM328984
AW565483
BQ516647
BM334368
BQ516646
CN151030
CN151116
                                                                                                                                                                                                                                 B11426331
B11892650
B11892650
B11892650
BQ473633
CL5971695
BB216105
CCB879922
BB255404
BQ987474
BQ987402
CCF002660
CCF00260
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26066000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CN140156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: 89288@cornell.edu
Insert Length: 435 Std
Seg primer: T7
POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CD529340.1 GI:40449352
 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 1
CD529340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
   υ
                                                                                                                               o o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Command line parameters:
-MODBL=frame+ p2n.model -DEV=xlh
-MODBL=frame+ p2n.model -DEV=xlh
-MODBL=frame+ p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US1066642/runat_25082005_130054_24868/app_query.fasta_1.199
-Q=/cgn2_1/USPTO_spool/US1066642/runat_25082005_130054_0-LOOPEXT=0
-UNTS=b1ts -START=1 -END=-1 -MATRIX=b10sum62 -TRANS=human40.cdi -LIST=45
-UNTS=b1ts -START=1 -END=-1 -MATRIX=b10sum62 -TRANS=human40.cdi -LIST=45
-UNTS=btts -START=1 -END=-1 -MATRIX=500 - MATLEN=2000000000
-USER=US10666642_@CGN 1_1 4352_@runat_25082005_130054_24868 -NCPU=6 -ICPU=3
-NO MAAP -LARGEQUERY -NGG_SCORES=0 -WAIT -DSPEDCK=10 -LONGLOG
-DBV TIMEOUT=120 -WARN TIMEOUT=30 -TRREADS=1 -XGAPOP=10 -XGAPOXT=0.5 -FGAPOP=6
-FGAPOXT=7 -YGAPOP=10 -YGAPOXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CD529340 02J01 Ara
CB879380 HP11P20T
AL503208 AL503208
BE412464 MCG004.30
BF009428 8878f04.3
BI209002 EST527042
BO515840 EST523255
BI433746 EST536507
                                                                                                                          August 25, 2005, 23:22:33 ; Search time 2304 Seconds (without alignments) 892.131 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                   1 DGFKWRKYGKKSVKNNINKR.....RVERDGDDAAYVITTYEGVH
                                                                                                                                                                                                                                                                                                                                                                                                                 68479088
                      GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                          nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                              34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                 of hits satisfying chosen parameters:
                                                                                                                                                                                              US-10-666-642-194_COPY_111_164
298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           summaries
                                                                                                                                                                                                                                                                                       0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CD529340
CB879380
AL503208
BE412464
BF009428
BU509002
BU209002
BU515840
                                                                                                                                                                                                                                                                                     Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9b eat1:

9b htc::

9b htc::

9b eat43:

9b eat6::

9b 9a81:

9b 9a81:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       700
849
549
634
671
412
                                                                                                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0
84.9
84.9
83.9
83.9
83.6
83.6
83.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST: *
                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        253
253
253
253
250
250
250
250
250
250
250
                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                 Total number
                                                                                          OM protein
```

Database :

Result No.

```
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL503208
                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
AL503208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HPI1P20T HP Hordeum vulgare subsp. vulgare cDNA clone HP11P20 S-PRIME, mRNA sequence. CB879380 CB879380.1 GI:30081366 EST.
/tissue type="Leaf"
/dev_stage="Yellow Leaf With Greenish Base Area"
/lab_host="E. coli"
/clone_lib="Arabidopsis Leaf Senescence Library"
/note="Organ: Rosette Leaf, Vector: pBluscript SKII+;
Site_1: EcoRI; Site_2: EcoRI; Senescent rosette leaves #5
and #6 (counted from the bottom) were harvested and
immediately frozen in liquid N2. The leaves were visibly
yellow excepted for the leaf base areas that were still
greenish. "
                                                                                                                                                                                                                                                                                                                                                                                                                                              215 GATGGTTTTAAATGGAGGAAGTATGGCAAGAATCTGTCAAAAAACAACATTAACAAGAGG 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hordeum vulgare subsp. vulgare
Hordeum vulgare subsp. vulgare
Eukaryora, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnollophyta, Liliopsida, Poales, Poaceae,
Pooideae, Triticeae, Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                          1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sub_species="vulgare"
/db_xref="cAB1:338869"
/db_xref="taxon:112509"
/clone="HP11P20"
/tissue_type="epidermis"
/dev_stage="sepidermis"
/lab_nost="XL10-Gold"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecular Markers Group, Department Genbank
Institute of Plant Genetics and Crop Plant Research (IPK)
Corrensetr: 3, 06466, Gatersleben, Germany
Tel: 039482-5522
Fax: 039482-5595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 643)
Zhang, H., Weschke, W., Michalek, W., Stein, N. and Graner, A.
EST sequencing and analysis in barley (2002)
Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Hordeum vulgare subsp. vulgare"
/mol type="mRNA"
/cultivar="barke"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            335 GACGATGCAGCTTATGTAATTACAACATATGAAGGAGTCCAT 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                      443
0000
843
8
                                                                                                                                                                                                                                                                                                                                                                                     US-10-666-642-194_COPY_111_164 (1-54) x CD529340 (1-435)
                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: stein@ipk-gatersleben.de
Insert Length: 643 Std Brror: 0.00
Plate: 11 row: P column: 20
Seg primer: T3:
                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                      298.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Stein Nils
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . .643
                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
CB879380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
```

ò 요 ઠે 셤 ઠે

```
/clone lib="Hordeum vulgare Barke roots"

//clone Thote="Vector: plasmid pBK-CMV; Site 1: EcoRI; Site 2:
//note="Vector: plasmid pBK-CMV; Site 1: EcoRI; Site 2:
//note made from roots of spring barley variety
'Barke', a high quality malting variety. Roots were grown
for two days on filter paper at room temperature Cloning
sites: EcoRI (5'-end of cDNA) and Xhol (3'-end of cDNA).
NOTB: Due to a cloning artefact caused by the kit, in most
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL501208 Hordeum vulgare Barke roots Hordeum vulgare subsp. vulgare cDNA clone HW01B17T 5', mRNA sequence.
AL503208
/clone_lib="HP"

/clone_lib="HP"

/clone_lib="HP"

/chote="Vector: pBluescript SK+; Site 1: EcoRI (5'-end of CDNA); Due to a cloning artefact caused by the kit, in most cases the EcoRI site is to Roy present, as well as the EcoRladapter used for cloning. To excise the insert, restriction sites upstream EcoRI should be used (e.g. BamHI, SalI,PEtI). NOTE: Also we to the cloning system used Blue/white selection for recombinats is not 100% reliable.Average insert size is 850 bp!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 04-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hordeum vulgare subsp. vulgare
Hordeum vulgare subsp. vulgare
Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Elilopsida; Poales; Poaceae;
Pooideae; Triticeae; Hordeum.
I (basea; I to 700)
Michalek, W., Weschke, W., Pleissner, K.-P. and Graner, A.
EST sequencing and analysis in barley
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Institute for Plant Genetics and Crop Plant Research Correnssir.3, D-06466 Gatersleben, Germany Email: michalekeipk-gatersleben.de, http://pgrc.ipk-gatersleben.de Seq primer: T3 primer for 5'end. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Hordeum vulgare subsp. vulgare"
/mol_type="mRNA"
/cultivar="barke"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                     644
444
643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x CB879380 (1-643)
                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sub_species="vulgare"
|db_xref="taxon:112509"
|clone="HW01B17T"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               700 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'tissue_type="roots"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL503208.1 GI:12029423
                                                                                                                                                                                                                                                                                                                                                                     3.97e-25
253.00
90.74%
81.48%
84.90%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Michalek W
```

```
/organism="Glycine max"
/mol type="mRNA"
/mol type="mRNA"
/culcivaz="Williams"
/db xref="taxon:3847"
/clone="GENOME SYSTEMS CLONE ID: Gm-c1064-248"
/tissue type="seedling epicotyls"
/dev stage="2 week old"
/lab host="bH108"
/lone="The cDNA library was constructed from mRNA isolated from the epicotyls of 2 week old seedling for the cultivar Williams. The seedlings were germinated in a growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shoemaker, R., Keim, P., Vodkin, L., Erpelding, J., Coryell, V., Shoemaker, R., Keim, P., Vodkin, L., Erpelding, J., Coryell, V., Kanama, A., Bolla, B., Marra, M., Hillier, L., Kucaba, T., Martin, J., Bock, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., Public Soybean EST Project
Unpublished (1999)
Other ESTS: BU547499 corresponding to Gm-r1088-4620 (3')
Contact: Shoemaker R/Public Soybean EST Project
Public Soybean EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: est@watson.wustl.edu
When it has been determined, an EST from the other end of this
clone is listed in the 'Other ESTs on clone' field. This clone is
available through: Biogenetic Services, 801 32nd Ave. Brookings, SD
57006 USA (phone: 800 423 4163; email: info@biogeneticservices.com)
Insert Length: 1115 Std Error: 0.00
High quality sequence stop: 421.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF009428

8878£04.yl Gm-c1064 Glycine max cDNA clone GENOME SYSTEMS CLONE ID:
Gm-c1064-248 5' similar to TR:Q9SJ09 Q9SJ09 PUTATIVE WRKY-TYPE DNA
BINDING PROTEIN. ;, mRNA sequence.
                                                                                                                                                                                                                                                                      Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, rosids, eurosids I, Fabales, Fabaceae, Papilionoideae, Phaseoleae,
                                                                                                                                                                                                          AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108,
Far: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                        41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
      4 0000
                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x BE412464 (1-849)
                           Conservative:
Mismatches:
Indels:
    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BF009428
BF009428.1 GI:10709704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycine max (soybean)
Glycine max
    253.00
90.74%
81.48%
84.90%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .549
Score:
Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glycine.
                                                                                                                                                                                                                                                                                                                                                                                                           200
                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF009428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hordeum vulgare

Hordeum vulgare

Hordeum vulgare

Hordeum vulgare

Hordeum vulgare

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Pooideae; Triticeae; Hordeum.

I (bases 1 to 849)

S Anderson, O.A., Appels, R., Bailey, P., Blake, T., Close, T.,

Cloutier, S., Dubcovsky, J., Feuillet, C., Gale, M., Graner, A.,

Gustafson, P., Herrmann, R.G., Holton, T., Jacquemin, J.M., Jia, J.,

Joudirer, P., Langridge, P., Lazo, G.R., Lin, J.J., McGuire, P.,

Gulhara, Y., Pecchioni, N., Qualset, C., Schuch, W., Selvaraj, G.,

Shariflou, M., Sorrells, M., Warburton, M. and Wenzel, G.

International Triticeae EST Cooperative (ITEC): Production of

Expressed Sequence Tags for Species of the Triticeae

Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BE412464 ST 24-JUL-2000 MCG004.A09R990625 ITEC MCG Barley Leaf/Culm Library Hordeum vulgare CDNA clone MCG004.A09, mRNA sequence.
    cases the EcoRI site is NOT present, as well as the EcoRI adapter. Average insert size is 1 kb Sequence trimming: Vector sequences and sequence ends were trimmed from the 5'-and 3'-end until a 50 bp window contains less than two ambiguities. The maximum length was set to 700 bp.
                                                                                                                                                                                                                                                                                                                                                                                                                                    439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                  'dev stäge="etiolated"
/clone_lib="ITEC MCG Barley Leaf/Culm Library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Institute for Plant Genetics & Crop Plant Research
Corrensstr. 3, D-06466 Gatersleben GERMANY
Tel: 49 39482 5521
Pax: 49 39482 5137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bmail: a graner@ipk-gatersleben.de
International Triticeae BST Cooperative (ITEC)
http://wheat.pw.usda.gov/genome.
Location/Qualifiers
                                                                                                                                                                                     700
744
700
000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       849
                                                                                                                                                                                                                                                                                                                                            x AL503208 (1-700)
                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'organism="Hordeum vulgare"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="MCG004.A09"
/tissue_type="leaf/culm"
                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db xref="taxon:4513"
                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE412464.1 GI:9410310
                                                                                                                                                                                4.4e-25
253.00
90.74%
81.48%
84.90%
                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
Pred. No.:
                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                        Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
BE412464
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

USA

chamber, excised above the soil level, and the plants were placed in a 100 ppm solution of auxin for 24 hours prior to harvesting. Complementary DNA was synthesized from mRNA using a primer consisting of a poly(dT) sequence with a XhoI restriction site. EcoRI adapters were ligated to the blunt-ended cDNA fragments followed by XhoI disestion. The cDNA fragments were directionally cloned into the EcoRI-XhoI restriction site of the pBluescript vector. The ligated cDNA fragments were transformed into DH10B host cells (GibcoBRL). This library was constructed in the laboratory of Dr. Randy Shoemaker."

Alignment Scores: RIGIN

```
BU547499 634 bp mRNA linear EST 16-SEP-2002 GM880013A20A06 Gm-r1088 Glycine max cDNA clone Gm-r1088-4620 3',
                                                                                                                                                                         370 GATGGATATAAATGGAGGAAATACGGAAAGAAGACAGTGAAGAACAACCAATCCCAAGG 429
                                                                                                                                                                                                                          Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots,
rosids, eurosids I, Fabales, Fabaceae, Papilionoideae, Phaseoleae,
                                                                                                                                             20
                                                                                                                                                                                                         40
                                                                                                                                                                                                      21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                         1 AspGlyPheLysTrpArgLysTytGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                   549
6 43
0 0
                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x BF009428 (1-549)
Length:
Matches:
Conservative:
Mismatches:
                                                                Indels:
                                                                                Gape:
                                                                                                                                                                                                                                                                                                                                                                                                              BUS47499
BUS47499.1 GI:22930360
8.67e-25
250.00
90.74%
79.63%
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycine max (soybean)
                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glycine max
                               Percent Similarity:
Best Local Similarity:
                                                                Query Match:
No.:
                                                                                                                                           ò
                                                                                                                                                                     g
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                  셤
```

Vodkii, L., Shoemaker, R., Keim, P., Retzel, E., Khanna, A., Shealy, R., Clough, S., Thibaud-Missen, F., Coryell, V., Erpelding, J., Raph, C., Shoop, E., Stromvik, M., Schweitzer, P., Gong, G. and Liu, L.
A Functional Genomics Program for Soybean (NSF 9872565) (2002) Unpublished (2002)
Unpublished (2002)
Conter ESTS: BRO09428 corresponding to Gm-c1064-248 (5')
Contact: Vodkin, L.O., PI, A Functional Genomics Program for Soybean (NSF 9872565) Lewin, H. A., Director, Keck Center for Comparative and Functional University of Illinois Edwin R. Madigan Building, 1201 W. Gregory, Urbana, IL 61801, USA Tel: (217) 244-6147 Fax: (217) 333-4582 Email: 1-vodkin@uiuc.edu
Insert Length: 634 Std Error: 0.00
Plate: GM88013A20 row: A column: 06
Seq primer: 5'-TTTTTTTTTTTTTTTTT (A/C/G)-3'
High quality sequence stop: 634. (bases 1 to 634) KEYWORDS SOURCE ORGANISM BU547499/c DEFINITION ACCESSION VERSION TITLE JOURNAL COMMENT REFERENCE AUTHORS RESULT 6

B1209002 671 bp mRNA linear EST 11-JUL-2001 ESTS27042 cTOS Lycopersicon esculentum cDNA clone cTOS18F24 5' end, mRNA sequence. B1209002

DEFINITION ACCESSION

/organism="Glycine max"

. 634

source

FEATURES

BI209002 RESULT 7

셤

8

414 40 20 21 AsnTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54 634 43 5 0 0 US-10-666-642-194_COPY_111_164 (1-54) x BU547499 (1-634) Conservative: Mismatches: Matches: Indels: Length: 1.03e-24 250.00 90.74% 79.63% 83.89% Percent Similarity: Best Local Similarity: Alignment Scores: Query Match: DB: No.:

DRIGIN

Score:

8

ଟ

VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL COMMENT

source

FEATURES

```
Buell,C.R., Hart,A., Baker,B., Tankaley,S., Fry,W., Smart,C.,
Restrepo,S., Griffiths,H., van der Hoeven,R., Tsai,J. and
Karamycheva,S.A.
Generation of a set of potato cDNA clones for microarray analyses
Unpublished (2002)
Other ESTS: EST623254
Contact: Robin Buell
The Institute for Genomic Research
9712 Medical Center Dr, Rockville, MD 20850, USA
Email: potaco-array@tigr.org
This clone can be obtained from the University of Arizona Genomics
Institute. Orders can be made through URL:
http://genome.arizona.edu/orders/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BI433746 11nfestans-challenged potato leaf, compatible reaction Solanum tuberosum cDNA clone PPCBI03 5' sequence, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Spermatophyta; maids; Solanales; Solanaceae; Solanum.

( bases 1 to 418)

Restrepo,S., Griffiths,H.M., Smart,C.D., Cho,J., Chiemingo,A., Gengrieo, S., Strepton, S., Griffiths, C.R., Ronning,C.M., Fry, W.E. and Baker,B.
Generation of ESTs from Potato Leaves Challenged with Phytophthora infestans, Compatible Interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clohe libe Generation of a set of potato cDNA clones for microarray analyses mixed potato tissues"
/note="Vector: pBluescript SK(-); Site 1: EcoRI; Site 2: XhoI; supplier: Combination of untreated and Phytophthora infestens-treated libraries of stolons, leaves, leaflets, axillaray buds of stem explants, petioles, germinating eyes, tubers, or roots."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                346 AATTACTACAAATGTTCAAGTGGAGGATGCAATGTGAAGAAAAGGTAGAAAGGGACAAT 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysSerValLysAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGATTCAAGCTATGTCATTACTACTTATGAAGGGATTCAC 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44
6
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-666-642-194_COPY_111_164 (1-54) x BQ515840 (1-412)
                                                                                                                                                                                                                                                                                                                                                                                        /mol type="mRNA"
/cultivar="Kennebec or Binjte"
/db xref="texon:4113"
/clone="STMIU36"
/tissue type="mixed tissues"
/lab_hoft="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                   1. .412
/organism="Solanum tuberosum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Solanum tuberosum (potato)
Solanum tuberosum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI433746.1 GI:15258436
  (bases 1 to 412)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249.00
90.74%
79.63%
83.56%
                                                                                                                                                                                                                                                                                                          Seq primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BI433746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI433746
                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST633255 Generation of a set of potato cDNA clones for microarray analyses mixed potato tissues Solanum tuberosum cDNA clone STMIU36 3' end, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Solanum tuberosum
Eukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
asterids; lamiids; Solanales; Solanaceae; Solanum.
                                                                                Eukaryota, Viridiplantee, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta; Wagnoliophyta; eudicotyledons; core eudicots; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; (Baseria, 1 mailes; Solanales; Solanaceae; Solanum; Lycopersicon. (Bases 1 to 671)

van der Hoeven,R., Sun,H., Bezzerides,J., Cho,J., Utterback,R., Generation of ESTs from Tomato Suspension Cultures
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360 AATTACTACAAATGTTCAAGTGGGGATGCAATGTGAAGAAAAAGAGTAGAAAGGGGACAAT 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 AsnTyrTyrLysCysSerSerGluGlyCysSerVallysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                 Clemson University Genomics Institute
Clemson University
100 Jordan Hall. Clemson, SC 29634, USA
Email: http://www.genome.clemson.edu/orders/index.html.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671
44
6
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x BI209002 (1-671)
                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Lycopersicon esculentum"
/mol_type="mmRNA"
/cultivar="TR46, E6203"
/db_xref="taxon:4081"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="cTOS18F24"
/tissue_type="suspension cultures"
/lab_hogt="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                           Lycopersicon esculentum (tomato)
Lycopersicon esculentum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Solanum tuberosum (potato)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ515840
BQ515840.1 GI:21374709
BI209002.1 GI:14686726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.1e-24
250.00
88.89%
81.48%
                                                                                                                                                                                                                                                                 Contact: CUGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
```

Query Match: DB:

δ

Pred. No.:

RESULT 8 BQ515840/c LOCUS DEFINITION

셤

ò

ð

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

```
Karamycheva, S.A.
Generation of a set of potato cDNA clones for microarray analyses
Unpublished (2002)
Other BST8: BS7623255
Contact: Robin Buell
The Institute for Genomic Research
Bmail: potato-array@tigr.org
This clone can be obtained from the University of Arizona Genomics
Institute. Orders can be made through URL:
Seq primer: T3:
                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue type="mixed tissues"
/lab_host="SOLR"
/lab_host="SOLR"
/lab_host="SOLR"
/clone_lib="Generation of a set of potato cDNA clones for microarray analyses mixed potato tissues"
/note="Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XhoI; supplier: Combination of untreated and Phytophthora infestans-treated libraries of stolons; leaves, leaflets, axillary buds of stem explants, petioles, germinating eyes, tubers, or roots."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67 AATTACTACAAATGTTCAAGTGGAGGATGCAATGTGAAGAAAAGAGTAGAAAGGGACAAT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Bermatophyta, Magnoliophyta, Liliopaida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
(bases 1 to 466)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21 AsnIyrIyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genoplante, a major partnership french program in plant genomics Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 GATGGATTTAAATGGAGGAAATATGGCAAAAAGGATGGTCAAGAATAGTTCAAATCCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoplante Sochefort 91025 EVRY CEDEX France 93, rue Henri Rochefort 91025 EVRY CEDEX France Frei: 33 1 69 47 54 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEW 126 GeneTag2 Zea mays cDNA, mRNA sequence.
CD967539
CD967539.1 GI:32827861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-666-642-194\_COPY\_111\_164 (1-54) x BQ515839 (1-418)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/cultivar="Kennebec or Binjte"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                               1. .418
/organism="Solanum tuberosum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                466 bp
                                                                                                                                                                                                                                                                                                                                                                                     /db xref="taxon:4113"
/clone="STMIU36"
                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.62e-25
249.00
90.74%
79.63%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Genoplante
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoplante.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CD967539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
CD967539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                             /clone libe P. infestans-challenged potato leaf, compatible reaction"
/note="weetor: pBluescript SK(-); Site 1: EcoRI; Site 2: XhoI; supplier: Cornell University, Fry lab; sequencing: The Institute for Genomic Research; Whole plants were challenged with 20,000 sporangia/ml of the compatible P. infestans isolate US 940480. Leaf tissue was collected at 3, 6, 9, 12, 24, 48, 72 hours after incoulation and frozen in liquid nitrogen immediately upon removal. Kennebec plants showed first symptoms of infection at 48 hours after incoulation. NOTE: We cannot exclude the possibility that this sequence is actually derived from Phytophthora rather than potato."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST633254 Generation of a set of potato cDNA clones for microarray analyses mixed potato tissues Solanum tuberosum cDNA clone STMIU36 5, end, mRNA sequence.
              Contact: Robin Buell
The Institute for Genomic Research
The Institute for Genomic Research
Email: gridal Center Dr. Rockville, MD 20850, USA
Email: potato-arrayetigr.org
This clone can be obtained from the University of Arizona Genomics
Institute. Orders can be made through URL:
http://genome.arizona.edu/orders/
Seq primer: M13F-R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, asterids, lamidie, Solanales, Solanaceae, Solanum.

1 (bases 1 to 418)

Buell, C.R., Hart, A., Baker, B., Tanksley, S., Fry, W., Smart, C., Restrepo, S., Griffiths, H., van der Hoeven, R., Tsai, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 AATTACTACAAATGTTCAAGTGGAGGATGCAATGTGAAAAAAAGAAAAGAAAAGGAACAAT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AspGlyPheLysTxpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 GATGGATTTAAATGGAGGAAATATGGCAAAAAGATGGTCAAGAATAGTTCAAATCCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-666-642-194_COPY_111_164 (1-54) x BI433746 (1-418)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
Mismatches:
Indels:

    .418
    /organism="Solanum tuberosum"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                              /tissue_type="leaf"
/dev_stage="6 week old"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/cultivar="Kennebec"
/db_xref="taxon:4113"
/clone="PPCBI03"
                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Solanum tuberosum (potato)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ515839
BQ515839.1 GI:21374708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8.62e-25
249.00
90.74%
79.63%
83.56%
    Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tuberosum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Solanum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ515839
                                                                                                                                                                                                        FEATURES
                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
```

ò 셤 ઠે a ઠે 유

EST 16-JUL-2003

20 99

```
BCORI; The library was made from poly-A RNA in the cloning
vector lambda ZAP II. Clones to be sequenced were
prepared by mass excision."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:12500807
                                                                                                                   1.06e-24
249.00
88.89%
81.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seg primer: PolyTMix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG049241
BG049241.1
                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pratt, L.H
                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                     Query Match:
                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG049241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Sorghum.

E I (bases I to 497)

C Ordonnier-Pratt, M.-M., Gingle, A., Marsala, C. and Pratt, L.H.

An EST database from Sorghum: light-grown seedlings

L Unpublished (2000)

Contact: Cordonnier-Pratt MM

Laboratory for Genomics and Bioinformatics

The University of Georgia, Department of Plant Biology

Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA

Tel: 706 583 0210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW744840 497 bp mRNA linear EST 19-JUL-2000 LG1 384 F02.g1_A002 Light Grown 1 (LG1) Sorghum bicolor cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: mmpratt@uga.edu
Sequences have been trimmed to exclude PolyA, vector and regions
below Phred quality 16. The threshold for highest quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .497
/ Organia Sorghum bicolor"
/ Organia EmRNA"
/ MD_Xref="taxon:4558"
/ AD_Xref="Lib="Light Grown 1 (LG1)"
/ ADORE TID="Light Grown 1 (LG1)"
/ ADORE TOTAL 10- 14-day-old light-grown (greenhouse)
seedlings; Vector: Lambda Zap; Site_1: Xho1; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 AbnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 GACGGATTCAAGTGGAAGTACGGGAAGAAGACGCCGTCAAGAACAGCCCAAATCCAAGG 70
  This sequence has been generated in the framework of the french plant genomics programme 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr).
                                                                                                                                                                                                                                                                                                                                                                                                                                         AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                  US-10-666-642-194_COPY_111_164 (1-54) x CD967539 (1-466)
                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                              /organism="Zea mays"
/mol type="mRNA"
/cultivar="mixture"
/db xref="taxon:4577"
/clone_lib="GeneTag2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: T7
High quality sequence start: 45
High quality sequence stop: 497
POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW744840.1 GI:7658644
                                                                                                                                                                                                                                                           9.83e-25
249.00
88.89%
81.48%
                                                                                    . 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor
                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW744840
                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW744840
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                    Bource
                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                             PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURES
                                                                                                                                                                                                     ORIGIN
```

ሯ 셤 ò g

셤 Š

```
1..501

/ Organism="Sorghum bicolor"

/ Organism="Sorghum bicolor"

/ Mol_Lype="mRNA"

/ Mb xref="taxon:4558"

/ Clone lib="Ovary 1 (OV1)"

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature stages

/ note="Organ: Mix of ovaries of varying immature in the cloning vector lambda ZAP II.

Clones to be sequenced were prepared by mass excision."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG049241 501 bp mRNA linear EST 25-JAN-2001 OV1_17_D05.g1_A002 Ovary 1 (OV1) Sorghum bicolor cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          43 GATGGATTCAAATGGAGGAAGTATGGGAAGGAAGGAAGGCTGTCAAGAACACCCCAAATCCAAGG 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mmpratt@uga.edu
Sequences have been trimmed to exclude PolyA, vector and regions
below Phred quality 16. The threshold for highest quality sequence
is 20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sorghum bicolor (sorghum)
Sorghum bicolor
Sorghum bicolor
Sukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Sorghum.
1 (bases 1 to 501)
Cordonnier-Pratt, M.-M., Gingle, A., Marsala, C., Sudman, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           An EST database from Sorghum: ovaries of varying immature stages Unpublished (2000)
Contact: Cordonnier-Pratt MM
                                                                                                                                                                                                                                                                                                                             1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
Fax: 706 583 0210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-666-642-194_COPY_111_164 (1-54) x AW744840 (1-497)
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence start: 246
High quality sequence stop: 498
POLYA=No.
```

ઠે 셤 ò 셤 ò 셤

```
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Eukaryota; Viridiplantae; Streptophyta; Poales; Poaceae;
Pooideae; Triticeae; Hordeum.

1 (bases 1 to 584)
Wing, R., Close, T.J., Kleinhofs, A., Wise, R., Wei, F., Begum, D.,
Choi, D., Yu, Y., Henry, D., Palmer, M., Rambo, T., Simmons, J.,
Choi, D.W., Fenton, R.D., Oates, R. and Main, D.
Development of a genetically and physically anchored EST resource
for barley genomics: Blumeria infected incompatible (Mla6) seedling
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HV CEb0009E04f Hordeum vulgare seedling green leaf EST 133-OCT-2001 HVCDNA0005 (Blumeria challenged) Hordeum vulgare subsp. vulgare cDAA clone HV CEb0009E04f, mRNA sequence.
                                                                                                                                                                                                                      /clone_lib="Hordeum vulgare seedling green leaf EST library HVcDMA0005 (Blumeria challenged)"
//note="Wector: lambdaZAP; Site 1: EORN; Site 2: Xhol;
C.I. 16151 (Mla6) plants were greenhouse grown in the R wise lab at lowa State University, Ames, IA; 7 day old green seedlings were challenged with isolate 5874 (AvzMla6) of Blumeria graminis f. sp. hordei, and leaves were harvested 20 and 24 hr poet-inoculation and snap frozen; uninoculated leaves were harvested 20 hr post-inoculation (Wei, Wise). In the IJ Close lab at the
                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                 21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                            1 AspGlyPheLysTrpArglysTyrGlyLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Hordeum vulgare subsp. vulgare"
                                                                                                                                                                                                                                                                                                                                                                501
4 4 4
0 0
                                                                                                                                                    US-10-666-642-194_COPY_111_164 (1-54) x BG049241 (1-501)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="seedling green leaf"
/lab_host="SOLR"
    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clembon University Genomics Institute
Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
Tel: 864 656 7288
Fax: 864 656 4293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/cultivar="C116151 (Mla6)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db xref="taxon:112509"
/clone="HV_CEb0009E04f"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sub_species="vulgare"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hordeum vulgare subsp. vulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE216050.1 GI:8903662
1.07e-24
249.00
88.89%
81.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Wing RA
                                   Percent Similarity:
Best Local Similarity:
Query Match:
    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE216050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
```

610 bp mRNA linear EST 04-JAN-2002 PIC1 31 H12.g1 A002 Pathogen-infected compatible 1 (PIC1) Sorghum bicolor_cDNA, mRNA sequence.

DEFINITION

ACCESSION

KEYWORDS

RESULT 15

셤 8 BM328984

Sorghum bicolor

Sukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogonae; Sorghum.

(Dases I to 610)

Cordonnier-Pratt, M. H., Gingle, A., Fang, G.C., Dean, R., Wing, R.,
Sudman, M. and Pratt, L.H.

An EST database from Sorghum: plants infected with a compatible

Sorghum bicolor (sorghum) BM328984 BM328984.1 GI:18068121

ORGANISM

REFERENCE AUTHORS Email: mmprationga.edu
Sequences have been trimmed to exclude PolyA, vector, and regions
Sequences have been trimmed to the threshold for highest quality sequence
is 20. Three-prime sequences, which are obtained with PolyTMix or

Laboratory for Genomics and Bioinformatics The University of Georgia, Department of Plant Biology Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA

Contact: Cordonnier-Pratt MM

Unpublished (2002)

JOURNAL

COMMENT

TITLE

pathogen

```
University of California, Riverside, total RNA was prepared from each sample pool, equal quantities of all three RNA pools were combined, poly(A) RNA was purified from the mixture, one primary unamplified cDNA library was made, and 1 million pfu were in vivo excised to give pBluescript SK(-) cDNA phagemids (Choi, Close). Phagemids were plated and picked at the Clemson University Genomics Institute (CUGI) (Begum, Palmer, Frisch, Atkins and Wing). Plasmid DNA preparations, DNA sequencing and sequence analysis were performed at CUGI (Wing, Yu, Frisch, Henry, Simmons, Oates, Rambo, Main). The sequence has been trimmed to remove vector sequence and contains a minimum of 100 bases of phred value 20 or above. For more details on library preparation and sequence analysis see thtp://www.genome.clemson.edu/projects/barley. To order this clone see http://www.genome.clemson.edu/projects/barley. To order this clone see http://www.genome.clemson.edu/projects/barley. See Close TJ, Wing R, Kleinhofs A, Wiss R (2001) Genetically and physically anofored BST resources for barley genomics. Barley Genetics Newsletter 31:29-30. (http://wheat.pw.usda.gov/ggpages/bgn/31/cover.html)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnTyrTyrLysCysSerSerGluGJyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584
66
60
00
00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-666-642-194_COPY_111_164 (1-54) x BE216050 (1-584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.29e-24
249.00
88.89%
79.63%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
```

Query Match:

Pred. No.:

Alignment

ORIGIN

```
lucation/Qualifiers

lucation/Qualifiers

lucation/Qualifiers

lucation/Qualifiers

/mol_type="marka"
/cultivar="BTx62"
/db_xref="taxon:4558"
/tiseue_type="Leaves"
/dev stage="taxon:4558"
/dev stage="taxon:4558"
/dev stage="taxon:4558"
/dev stage="taxon:4558"
/dev stage="taxon:456"
/dev stage="taxon:456"
/dev stage="taxon:16eted compatible 1 (PIC1)"
/clone lib="pathogen:infected compatible 1 (PIC1)"
/note="vector: pBluescript II SK(-) from Lambda Zap II;
/note="vector: pBluescript II SK(-) from Lambda Zap II;
/note="vector: pBluescript II SK(-) from Lambda Zap II;
/note="vector: pBluescript in sorghum isolate of the anthracnose pathogen Colletorichum graminicola. Inoculated plants
were kept in a 25 C dark growth chamber with 100% relative humidity for 24 hr, followed by 12/12 hr of light/dark
cycle at 25 C with 90% relative humidity for another 24 hr. All leaves were harvested and quick frozen with liquid nitrogen and stored in a -80 C freezer. The library was made from poly-A RNA in the cloning vector lambda ZAP II.
Clones to be sequenced were prepared by mass excision.
WARNING: While most or all ESTS are expected to derive from the host plant, no effort was made to eliminate ESTS deriving from the pathogen."
T7 sequencing primer, are presented as the reverse complement. Seq primer: T7 High quality sequence start: 20 High quality sequence stop: 610 POLYA-Yes.
                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                      PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
```

Length:
Matches:
Conservative:
Mismatches: 1.36e-24 249.00 88.89% 81.48% Percent Similarity: Best Local Similarity: Query Match: DB: Alignment Scores: Pred. No.:

US-10-666-642-194_COPY_111_164 (1-54) x BM328984 (1-610)

ò

g ò

g

g

ઠે

Search completed: August 26, 2005, 01:46:02 Job time : 2312 secs

This Page Blank (uspto)

Sequence:

Run on:

Searched:

```
Ado62507 Transcrip
Adi3068 Plant tra
Ado03200 Corn orth
Ado62505 Transcrip
Ado63207 Transcrip
Ado63207 Transcrip
Ado63207 Transcrip
Ado63207 Transcrip
Adi43067 Plant tra
Ado63207 Corn orth
Ado62508 Transcrip
Adi43066 Plant tra
Ado63207 Corn orth
Ado62508 Transcrip
Adi43066 Plant tra
Ado63207 Corn orth
Ado62501 Transcrip
Adi43069 Plant tra
Ado62501 Transcrip
Adi43069 Plant tra
Ado62501 Arabidops
Add62972 Plant yie
Adi41730 Plant tra
Ado6321 Arabidops
Adc36218 Arabidops
Adc36219 Arabidops
Adc36279 Arabidops
Adc36279 Arabidops
Adc36279 Arabidops
Adc36279 Arabidops
Adc36270 Transcrip
Ad31000 Plant yie
Ad4148 Plant tra
Ad601670 Transcrip
Ad315508 DNA encod
Ad4148 Plant tra
Ad61552 DNA encod
Ad4148 Plant tra
Ad61552 DNA encod
Ad315508 DNA encod
Ad315508 Arabidops
Ad415532 DNA encod
Ad315508 DNA encod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thalecress; transcription factor; ss; gene; plant; transgenic; abiotic stress; cold tolerance; heat tolerance; drought; osmotic stress; phosphate limitation; potassium limitation; nitrogen limitation; hormone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change; meristem cell differentiation; phyllotaxy; apical dominance; trichome development; seed development; premature senescence; delayed senescence; lethality; necrosis; plant size; leaf morphology; secondary metabolism; light response; shade avoidance.
                                                                                                                                                                                                                                                                                                                                                                                                       Adb23121 Environme
Aac40213 Arabidops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Thalecress transcription factor cDNA #403.
                                                                                                                                      ADI43066
ADC03203
ADC03195
ADC62501
ADI43069
ADC03209
ABK65246
ACD98373
ADD299373
                                                                                                                                                                                                                                                                                                                                        ADI44148
ADO61750
ABZ13876
ADA68247
                                                                                                                                                                                                                                                                                                                                                                                   ADA15532
ADO01670
                                                             ADO62505
ADO03196
ADO62502
ADI43067
ADO03207
                                                                                                                                                                                                                                   AD141790
AD002394
                                                                                                                                                                                                                                                                                     AAC38694
ADA15508
ACD98366
ADO01672
                                                                                                                                                                                                                                                                  AAC35279
AAC48380
                                                                                                                                                                                                                                                         AAC45051
                                                                                                                                                                                                                                                                                                                                                                                                                   AAC40213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADO02392 standard; cDNA; 585 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .0-APR-2003; 2003US-00412699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-00394519.
                                                                                                                                                                                                                         10
12
12
3
                                                                                                                                                                                                                                                                                                                      62229
   01-JUL-2004 (first entry)
  1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana.
   66.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JS2004045049-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-MAR-2004.
  AD002392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AD002392
  υu
                                                                                                                                                                                  υυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Command line parameters:
-MODBL=frame+ p2n.model -DEV=xlh
-Q=/cgn2_1/USFVO spool/US1066642/runat_25082005_130052_24846/app_query.fasta_1.199
-Q=/cgn2_1/USFVO spool/US1066642/runat_25082005_I30052_24846/app_query.fasta_1.199
-Q=/cgn2_1/USFVO spool/US1066642/runat_25082005_I30052_2486/app_query.fasta_1.199
-LOOPEXT=0 -UMITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR MAX=100 -THR_MIN=0 -ALIGN=15
-LOOPEXT=0 -UMITS=bits -NOFM=ext -HRAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10666642_@CGN 1 1 644_@runat_25082005_130052_24846 -NCPU=6 -ICPU=3
-NO MAAP -LARGEQUERY -NGG SCORES=0 -WAIT -DSPEDCK=100 -LONGLOG
-PBV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FCAPOP=6
-FGAPOR=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ado02392 Thalecres
Ado61726 Transcrip
Aac49725 Arabidops
Ado63551 Transcrip
Ado03201 Corn orth
                                                                        August 25, 2005, 18:08:19 ; Search time 391 Seconds (without alignments) 817.560 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                             298
1 DGFKWRKYGKKSVKNNINKR.....RVERDGDDAAYVITTYEGVH
             GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                      OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                               of hits satisfying chosen parameters:
                                                                                                                                                                                                                          4390206 segs, 2959870667 residues
                                                                                                                  US-10-666-642-194_COPY_111_164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADO02392
ADO61726
AAC49725
ADO63551
ADO03201
                                                                                                                                                                       0.5
0.5
0.0
0.0
                                                                                                                                                           BLOSUM62
Xgapop 10.0, Xgapext
Ygapop 10.0, Ygapext
Fgapop 6.0, Fgapext
Delop 6.0, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genesegn2001as:*
genesegn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8: geneseqn2003as:*
9: geneseqn2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geneseqn2002bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       geneseqn2002as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Geneseq_16Dec04:*
geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        geneseqn2000s:*
                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585
585
1917
740
823
                                                                                                                                                                                                                                                                                                                      Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0
100.0
100.0
83.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298
298
250
250
                                                                                                                   Title:
Perfect score:
                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                Total number
```

Database :

ლ 4- N

Result

```
16-NOV-2000; 2000US-00713994.
27-WAR-2001; 2001US-00819142.
17-APR-2001; 2001US-00837444.
30-JAN-2002; 2002US-00958131.
14-JUN-2002; 2002US-00171468.
                       22-WAR-2000; 2000US-00533030.
22-WAR-2000; 2000US-0053399.
22-WAR-2000; 2000US-00533648.
06-APR-2000; 2000WO-US009448.
                                                                             09-AUG-2002; 2002US-00225066.
09-AUG-2002; 2002US-00225067.
                                                                                          09-AUG-2002; 2002US-00225068
                                                                                                 -2002; 2002US-0434166P
                                                                                                       25-FEB-2003; 2003US-00374780
                                                                                                                                    RIECHMANN J L.
                                                                                                                                                                             JIANG C.
SAMAHA R S.
PILGRIM M L.
CREELMAN R A.
DUBELL A N.
RATCLIFFE O.
KUMIMOTO R.
                                                                                                                                         ADAM L J.
BROUN P E.
PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                                                                        SHERMAN B K.
                                                                                                                                                                                                                                    Fromm ME,
                                                                                                                  ZHANG J.
FROMM M E.
HEARD J E.
                                                                                                                                                                                                                                         Pineda O,
                                                                                                                                                                                                     (DUBE/)
(RATC/)
(KUMI/)
(SHER/)
                                                                                                                                                                                                                                     ט'
                                                                                                                  (ZHAN/)
(FROM/)
(HEAR/)
                                                                                                                                                                              (JIAN/)
(SAMA/)
(PILG/)
(CREE/)
                                                                                                                                          (ADAM/)
(BROU/)
                                                                                                                                                      PINE/)
                                                                                                                                                            (REUB/)
                                                                                                                                                                  KEDD/)
                                                                                                                                                                         XUGG/)
                                                                                                                                    (RIEC/)
                                                                                                                                                                                                                                     Zhang
```

Broun PE; Fromm ME, Heard JE, Riechmann JL, Adam LJ, Broun PE Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; , Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R; Pilgrim ML, Sherman BK;

WPI; 2004-225755/21. P-PSDB; ADO02393.

transgenic plant, useful in developing phenotypes with altered or improved characteristics or traits.

Claim 1; SEQ ID NO 805; 213pp; English

The invention relates to a transgenic plant comprises a recombinant polynucleotide having a polynucleotide sequence or its complementary sequence comprising a sequence encoding a polypeptide, that initiates transcription (i.e. a transcription factor) from Arabidopsis, Soybean, transcription (i.e. a transcription factor) from Arabidopsis, Soybean, Rice, Rape or Corn, comprising any of the sequences appearing as AD00158 - AD00353-AD003559. Also included are using a transgenic constitutive, inducible or tissue-specific promoter and a recombinant constitutive, inducible or tissue-specific promoter and a recombinant constitutive, inducible or tissue-specific promoter and a recombinant constitutive, inducible of tissue-specific promoter and a recombinant constitutive, inducible dayor is a modified plant having a modified trait, identifying a factor that is modulated by or interacts with a polypeptide encoded by the polymucleotide sequence and identifying at least one downstream polypeptides encoded by the polymucleotide described above. The transgenic plant is useful for producing a plant that has an altered contrained; to each to chilling, germination in cold conditions, freezing tolerance to lerance to chilling, germination in cold conditions, freezing tolerance to contrained to heat, tolerance to drought, tolerance to osmotic stress, tolerance to continitation, decreased sensitivity to nitrogen limitation, altered hormone sensitivity, reduced sensitivity to abscisic acid, an altered response to ethylene, disease resistance, altered susceptibility to

Exystphe, altered susceptibility to Pseudomonas syringae, altered

Exystphe, altered susceptibility to Pseudomonas syringae, altered

Susceptibility to Sclerotinia, altered sugar sensing, improved seed

G germination and seedling vigor, early flowering, late flowering, extended

period of flowering, an inflorescence architectural change, a change in

C stem bifurcations, a lack of a shoot meristem, reduced meristem, reduced

differentiation, altered phyllotaxy, altered branching pattern, reduced

apical dominance, reduced trichome development, altered cell

collistration/cell differentiation, premature senescence, delayed

crowth, increased root hairs, altered stem morphology, increased root

growth, increased plant size, a change in leaf morphology, increased

cropiant size, decreased plant size, a change in leaf morphology, increased

cropiant size, decreased plant size, a change in leaf morphology, increased

altered leaf development, increased leaf size and mass, glossy leaves,

content, increased size, decreased seed size, altered seed shape, change in

content, increased leaf anthocyanins, an alteration in leaf prenyl lipid

content, increased leaf anthocyanins, an alteration in leaf prenyl lipid

content, increase in seed oil content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein content, decrease in seed fatty acid

content, increase in seed protein ontent, decrease in seed fatty acid

content, increase in seed protein ontent, decrease in seed fatty acid

content, increase in seed protein content, servants, wherevolland, increase in seed protein

content, increas 84999999999999999999999999

Sequence 585 BP; 202 A; 95 C; 135 G; 153 T; 0 U; 0 Other;

```
1 AspGlyPheLysTrAArgLysTyrGlyLysExValLysAsnasnIleAsnLysArg
                                                                                                                                                                  21 ABITYLTYLLYBCYBSerSerGluGlyCyBSerValLyBLyBArgValGluArgABpGly
                                                                                                                                                                                                                             451 GACGATGCAGCTTATGTAATTACAACATATGAAGGAGTCCAT 492
                                                                                                                                                                                                                 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
          US-10-666-642-194_COPY_111_164 (1-54) x AD002392 (1-585)
        Length:
Matches:
Conservative:
Mismatches:
                                                        Indels:
        5.9e-34
298.00
100.00%
100.00%
                                Percent Similarity:
Best Local Similarity:
Alignment Scores:
                                                                                                                                                                                                                  41
                                                        Query Match:
DB:
                                                                                                                                                                                                                                       셤
                                                                                                                   ठ
                                                                                                                                                                   8
```

40

RESULT 2 AD061726

ADO61726 standard; DNA; 585 AD061726;

BP

Transcription factor G1274 coding sequence, SEQ ID 193.

(first entry)

15-JUL-2004

Plant; transcription factor; transgenic plant; abiotic stress tolerance; sendicis stress tolerance; cold tolerance; heat tolerance; low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.

Arabidopsis thaliana

WO2004031349-A2

15-APR-2004.

Adam LJ, Reuber TL; Sherman BK;

Creelman RA, , Keddie JS,

```
germination in heat, increased tolerance to treezing conditions, increased tolerance to low nitrogen sensitivity to disease, including increased and particularly Eryeiphe, Fusarium and Botrylis, increased tolerance to multiple fungal pathogens, increased resistance to glyphosate, increased sensitivity to ABA, reduced sensitivity to ABA, reduced sensitivity to ABC, altered sugar sensing, increased tolerance to sugars, altered carbon/nitrogen sensing, early flowering, latered flowering, altered carbon/nitrogen sensing, early flowering, latered flowering, altered flowering, altered branching pattern, altered stem morphology, altered vascular tissue structure, reduced apical dominance, altered richome density, altered branching pattern, altered trichome structure, altered root development, altered shade avoidance, altered seed development, altered trichome development, altered seed germination, slow growth, fast growth, altered seed ripening, altered seed germination, altered seed development, altered programmed cell germination, slow growth, fast growth, altered seed ripening, altered seed germination, altered seed development, altered programmed cell death, lethality when overexpressed altered necrosis patterns, increased plants, dark grown altered seed coloration, altered seed slage, increased leaf size and mass, light green or gray leaves, increased leaf size and mass, large seed, increased leaf wax, increased leaf fatty acids, altered seed oil content, altered seed coloration, altered seed seed seed seed of content, altered seed shape, altered seed seed oil content, altered seed protein content, altered seed oil content, altered seed shape, and decreased anthocyanin levels, and decreased anthocyanin le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proteins (I) and nucleotide sequences (II) (ADO61534-ADO63778). The sequences can be used to produce transgenic plants, which overexpress (II), where the transgenic plant has an altered trait as compared to a non-transgenic plant or wild type plant. The transgenic plant comprises an altered trait selected from increased tolerance to abiotic stress, increased tolerance to cold, increased tolerance to cold, increased tolerance to heat, increased germination in cold, increased tolerance to heat, increased germination in heat, increased tolerance to heat, increased germination in heat.
                                                                                                                                                                                                                                                                                                                                                                                                                                             New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to novel plant transcription factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 193; 510pp; English
                                                                                                                                                                                                                                                               Jiang C, Heard JE, Ratcliffe O, C.
Riechmann JL, Haake V, Dubell AN,
                                                                                                                                                                                                          (MEND-) MENDEL BIOTECHNOLOGY INC.
                               18-SEP-2003; 2003WO-US030292.
                                                                                       18-SEP-2002; 2002US-0411837P.
                                                                                                                      17-DEC-2002; 2002US-0434166P.
24-APR-2003; 2003US-0465809P.
                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-330163/30.
P-PSDB; ADO61727.
```

Sequence 585 BP; 202 A; 95 C; 135 G; 153 T; 0 U; 0 Other;

```
US-10-666-642-194_COPY_111_164 (1-54) x ADO61726 (1-585)
                                      Conservative:
Mismatches:
Indele:
              Length:
Matches:
            5.9e-34
298.00
100.00%
100.00%
                                                       Best Local Similarity:
                                       Percent Similarity:
Alignment Scores:
Pred. No.:
                                                                   Query Match:
```

1 AspGlyPheLysTrpArgLysTyrGlyLysLysEvSerValLysAsnAsnIleAsnLysArg 20

```
331 GATGGTTTTAAATGGAGGAAGTATGGCAAGAAATCTGTCAAAAACAACATTAACAAGAGG 390
                                    Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                   AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                 451 GACGATGCAGCTTATGTAATTACAACATATGAAGGAGTCCAT 492
                                                        41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                        Arabidopsis thaliana DNA fragment SEQ ID NO: 62208
                                                                                                                 AAC49725 standard; DNA; 1917 BP
                                                                                                                                                                                                                                                                                                                                                                                               99US-0129845P.
99US-0130077P.
99US-0130449P.
99US-0130510P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0132485P.
99US-0132486P.
99US-0132487P.
                                                                                                                                                                                                                                                                                                                                      99US-0125788P.
99US-0126264P.
99US-0126785P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0132048P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0134256P.
99US-0134218P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0134221P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0134941P
                                                                                                                                                                                                                                                                                                                     99US-0123180P
99US-0123548P
                                                                                                                                                                                                                                                                                                                                                                             99US-0128234P
                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0130891P
                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0131449P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0132863P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0134768P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0135124P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0135629P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0136021P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0136392P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0138094P
99US-0138540P
                                                                                                                                                                                                                                                                                         25-FEB-2000; 2000EP-00301439
                                                                                                                                                                                                                                                                                                                                                                   99US-0127462P
                                                                                                                                                                                                                                                                                                                                                                                       99US-0128714P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0132484P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0134219P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0135353P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0137724P
                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                 Arabidopsis thaliana
                                                                                                                                                     18-OCT-2000
                                                                                                                                                                                                                                                    3P1033405-A2
                                                                                                                                                                                                                                                                                                                                      23-MAR-1999;
25-MAR-1999;
29-MAR-1999;
01-APR-1999;
06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-01-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-APR-1999
                                                                                                                                                                                                                                                                       06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                      08-APR-1999
16-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                28-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-MAY-1999
20-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                          19-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                    21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                      23-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-JUN-1999
                                                                                                                                   AAC49725;
                    21
                                                                                              RESULT 3
                                                                                                         AAC497
                                                                          셤
                                                                                                                          ð
                    ઠે
```

	Length: 1917 Matches: 54 Conservative: 0 Mismatches: 0 Indels: 0
99US-01481171P 99US-0148313P 99US-0148318P 99US-0149368P 99US-0149175P 99US-0149175P 99US-0149175P 99US-0149175P 99US-0149723P 99US-0149723P 99US-0151066P 99US-0151066P 99US-0151303P 99US-0153786P 99US-015378P 99US-015933P 99US-015933P 99US-015933P 99US-015933P 99US-015933P 99US-015933P 99US-015933P 99US-01698P 99US-016074P 99US-016074P 99US-016098P 99US-016098P 99US-016195P 99US-016195P 99US-016195P 99US-016195P 99US-016195P 99US-016195P	2.84e-33 298.00 100.00\$ 100.00\$
PR 11-AUG-1999; PR 11-AUG-1999; PR 12-AUG-1999; PR 13-AUG-1999; PR 13-AUG-1999; PR 13-AUG-1999; PR 13-AUG-1999; PR 20-AUG-1999; PR 20-AUG-1999; PR 20-AUG-1999; PR 21-AUG-1999; PR 21-AUG-1999; PR 21-AUG-1999; PR 22-AUG-1999; PR 23-AUG-1999; PR 23-AUG-1999; PR 23-AUG-1999; PR 23-AUG-1999; PR 21-AUG-1999; PR 23-AUG-1999; PR 21-AUG-1999; PR 21-AUG-1999; PR 23-AUG-1999; PR 23-AUG-1999	Alignment Scores: Pred. No.: Score: Percent Similarity: Query Match:
99US - 0138847P 99US - 013913P 99US - 0139453P 99US - 0139461P 99US - 014083P 99US - 014333P 99US - 014333P 99US - 014333P 99US - 014333P 99US - 0144333P 99US - 0144333P 99US - 0144333P 99US - 0144333P 99US - 0144333P 99US - 0144334P 99US - 014508P 99US - 014538P 99US - 014538P	99US-0147192P. 99US-0147260P. 99US-0147313P. 99US-0147416P. 99US-0147435P.
10 - UUN - 1999 14 - UUN - 1999 16 - UUN - 1999 16 - UUN - 1999 18 - UUN - 1999 19 - UUL - 1999 10 - UUL - 1999 11 - UUL - 1999 12 - UUL - 1999 13 - UUL - 1999 14 - UUL - 1999 15 - UUL - 1999 16 - UUL - 1999 17 - UUL - 1999 18 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 10 - UUL - 1999 11 - UUL - 1999 12 - UUL - 1999 13 - UUL - 1999 14 - UUL - 1999 15 - UUL - 1999 16 - UUL - 1999 17 - UUL - 1999 18 - UUL - 1999 18 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 10 - UUL - 1999 10 - UUL - 1999 11 - UUL - 1999 12 - UUL - 1999 13 - UUL - 1999 14 - UUL - 1999 15 - UUL - 1999 16 - UUL - 1999 17 - UUL - 1999 18 - UUL - 1999 18 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 19 - UUL - 1999 10 - U	888888

```
Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AD00320
                                                                                                                                                                                                                                                                                                                                                          Score:
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fungal disease and particularly Brysiphe, Fusarium and Botrytis, increased tolerance to multiple fungal pathogens, increased resistance to glyphosate, increased sensitivity to ABA, reduced sensitivity to ABA, increased sensitivity to ACC, altered sugar sensing, increased tolerance to sugars, altered carbon/nitrogen sensing, early flowering, late flowering, altered flower structure, loss of flower determinacy, reduced
                                                                                  331 GATGGTTTTAAATGGAGGAAGTATGGCAAGAAATCTGTCAAAAACAACATTAACAAGAGG 390
                                                                                                                                         40
                                                      20
                                                                                                                                                                                                                                                                                                                                                                    Plant; transcription factor; transgenic plant; abiotic stress tolerance; osmotic stress tolerance; cold tolerance; heat tolerance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention relates to novel plant transcription factor proteins (I) and nucleotide sequences (II) (ADO61334-ADO63778). The sequences can be used to produce transgenic plants, which overexpress (II), where the transgenic plant has an altered trait as compared to a non-transgenic plant or wild-type plant. The transgenic plant comprises an altered trait selected from increased tolerance to abiotic stress, increased tolerance to cond, increased tolerance to osnoric stress, increased tolerance to cold, increased tolerance to heat, increased germination in cold, increased tolerance to heat, increased germination in heat, increased tolerance to the increased tolerance to low nitrogen conditions, increased tolerance to low phosphate conditions, increased tolerance to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                     1 AspGlyPheLysTrpArgLysTyrGlyLysLysExgSerValLysAsnAsnIleAsnLysArg
                                                                                                               AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adam LJ, Reuber TL;
Sherman BK;
                                                                                                                                                                                                                                                                                                                                                                                                  low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.
                                                                                                                                                                                                                                                                                                                                          Transcription factor G1274 orthologous sequence, SEQ ID 2018.
                                                                                                                                                                                 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                          US-10-666-642-194_COPY_111_164 (1-54) x AAC49725 (1-1917)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jiang C, Heard JB, Ratcliffe O, Creelman RA, Riechmann JL, Haake V, Dubell AN, Keddie JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 2018; 510pp; English.
 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MEND-) MENDEL BIOTECHNOLOGY INC.
                                                                                                                                                                                                                                                        ADO63551 standard; DNA; 740 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-DEC-2002; 2002US-0434166P.
24-APR-2003; 2003US-0465809P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-SEP-2003; 2003WO-US030292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-SEP-2002; 2002US-0411837P.
                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Lycopersicon esculentum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-330163/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004031349-A2
                                                                                                                                                                                                                                                                                                               15-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-APR-2004
                                                                                                               21
                                                                                                                                                                     41
                                                                                                                                                                                                451
                                                                                                                                                                                                                                                                                   ADO63551;
                                                                                                                                                                                                                                           ADO63551
                                                                                                                                                                                                                                                        셤
                                                                            셤
                                                                                                             ð
                                                                                                                                        용
                                                                                                                                                                    ò
```

```
Lettility, altered willow merable movetophemin, altered prantining partern, altered stem morphology, altered vaccular tissue structure, reduced apical dominance, altered trichome density, altered trichome development, altered trichome structure, altered seed trichome structure, altered seed trichome structure, altered seed favelopment, altered seed favelopment, altered seed captured seed development, altered cell differentiation, contention, slow growth, fast growth, altered cell differentiation, altered cell expansion, altered phase change, altered sensence, abnormal embryo development, altered programmed cell cert, lethality when overexpressed, altered necrosis patterns, increased plant size, increased biomass, large seedlings, dwarfed plants, dark correct or green leaves, change in leaf shape, increased leaf size and mass, light corrent seed coloration, altered seed size, altered seed shape, large seed, seed, shape, altered seed seed oil content, altered seed seed oil content, altered seed seed oil content, altered seedprenyl content, altered leaf prenyl lipid content, increased anthocyanin levels, and decreased anthocyanin levels, and decreased anthocyanin levels, more the seed specification, but was obtained in celetronic format directly from WIPO at the wipo int/pub/published_pot_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            435 GATGGATTTAAATGGAGGAAATATGGCAAAAAGATGGTCAAGAATAATCCAAATCCAAGG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cold tolerance; heat tolerance; drought; osmotic stress; hoposphate limitation; potassium limitation; nitrogen limitation; hoposmone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change;
fertility, altered shoot meristem development, altered branching pattern,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 AsnīvrīvrīvstysGerSerGluGlyCysSerValivsLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Corn; transcription factor; 88; gene; plant; transgenic; abiotic stress;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    meristem cell differentiation; phyllotaxy; apical dominance;
trichome development; seed development; premature senescence;
delayed senescence; lethality; necrosis; plant size; leaf morphology;
seed morphology; secondary metabolism; light response; shade avoidance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 AspGlyPhelysTrpArgLysTyTGlyLysSerValLysAsnsIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Corn orthologue of Thalecress transcription factor, cDNA #180.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 740 BP; 229 A; 131 C; 114 G; 266 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  315 AAAGATTCAAGCTATGTCATTACTACTTATGAAGGGATTCAC 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7444900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x ADO63551 (1-740)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indela:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AD003201 standard; cDNA; 823 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-APR-2003; 2003US-00412699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                250.00
88.89%
81.48%
83.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JS2004045049-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AD003201;
```

```
2000WO-US009448

2000US-0013994

2001US-00819442

2001US-00837444

2001US-00958131

2002US-00171468
     2000US-00489376.
2000US-00506720.
2000US-00532591.
                      2000US-00533029.
2000US-00533030.
2000US-00533392.
                                       2000US-00533648.
                                                                                           2002US-00225068
                                                                                      2002US-00225067
                                                                                                 2002US-0434166P
2003US-00374780
                                                                                                                  ZHANG J.
FROMM M E.
HERAND J E.
RIECHWANN J L.
ADAM L J.
BROUN P E.
PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                                              CREELMAN R A.
                                                                                                                                                                       YU G.
JIANG C.
SAMAHA R S.
PILGRIM M L.
                                                                                                                                                                                                               KUMIMOTO R. SHERMAN B K.
                                                                                                                                                                                                   DUBELL A N. RATCLIFFE O.
                      22-MAR-2000;
22-MAR-2000;
22-MAR-2000;
                                       22-MAR-2000;
06-APR-2000;
16-NOV-2000;
27-MAR-2001;
                                                                     30-JAN-2002;
                                                                                      09-AUG-2002;
                                                                                           09-AUG-2002;
17-DEC-2002;
                                                                                                       25-FEB-2003;
                                                                                09-AUG-2002;
                                                               17-APR-2001;
                                                                           14-JUN-2002;
           17-FEB-2000:
                 22-MAR-2000;
                                                                                                                                                     (PINE/)
(REUB/)
(KEDD/)
                                                                                                                                                                      (YUGG/)
(JIAN/)
(SAMA/)
                                                                                                                                                                                       (PILG/)
(CREE/)
(DUBE/)
(RATC/)
                                                                                                                                                                                                               (KUMI/)
(SHER/)
                                                                                                                   ZHAN/)
                                                                                                                                          (ADAM/)
                                                                                                                        FROM/)
                                                                                                                                               (BROU/)
                                                                                                                              HEAR/
                                                                                                                                     RIEC/
```

Riechmann JL, Adam LJ, Broun PE; Fromm ME, Heard JE, Riechmann JL, Adam LJ, Broun Pl Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; IL, Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R; Pilgrim ML, Sherman BK; Pineda O, Zhang J,

WPI; 2004-225755/21.

transgenic plant, useful in developing phenotypes with altered or improved characteristics or traits.

Claim 1; SEQ ID NO 1615; 213pp; English

The invention relates to a transgenic plant comprises a recombinant polynucleotide having a polynucleotide sequence or its complementary sequence comprising a sequence encoding a polypeptide, that initiates transcription (i.e. a transcription factor) from Arabidopsis, Soybean, Rice, Rape or Corn, comprising any of the sequences appearing as AD001580-AD003537-AD003559. Also included are using a transgenic plant to grow a progeny plant, an expression cassette (comprising a constitutive, inducible or tissue-specific promoter and a recombinant polymucleotide described above), a host cell comprising the expression cassette, producing a modified plant having a modified trait, identifying a factor that is modulated by or interacts with a polypeptide encoded by the polymucleotide sequence and identifying at least one downstream colymucleotide sequence that is subject to a regulatory effect of any of transgenic plant is useful for producing a plant that has an altered contraite e.g. an enhanced tolerance to abiotic stress (increased tolerance to chilling, germination in cold conditions, freezing tolerance to chilling, germination in cold conditions, freezing tolerance to contining all, tolerance to phosphate limitation, tolerance to potsassium continitation, decreased sensitivity to nitrogen limitation), altered contends ensitivity, reduced sensitivity to abscisic acid, an altered component to ethylene, disease resistance, altered succeptibility to

```
Expaiphe, altered susceptibility to Fusarium, altered susceptibility to Susceptibility to Sclerotinia, altered sugar sensing, improved seed consumentability to Sclerotinia, altered sugar sensing, improved seed germination and seedling vigor, early flowering, late flowering, extended period of flowering, an inflorescence architectural change, a change in catemost flowering, altered branching pattern, reduced apical dominance, reduced trichome development, altered branching pattern, reduced apical dominance, reduced trichome development, altered stem morphology, increased root growth, increased root hairs, altered stem morphology, increased root proliferation/cell differentiation, premature senescence, delayed compared to proliferation/cell differentiation, premature senescence, delayed compared to proliferation/cell differentiation, premature senescence, delayed compared to fact altered seed plant size, a change in leaf morphology, increased leaf development, increased leaf size, altered seed shape, change in leaf biochemistry, increased leaf size, altered seed shape, change in content, increased leaf insoluble sugars, decreased leaf insoluble sugars, decreased in seed fatty acid content, increased leaf suchocyanins, an alteration of leaf fatty acid content, increase in seed fatty acid content, increase in seed fatty acid content, decrease in seed fatty acid content, increase in seed protein content, decrease in seed fatty acid content, increase in seed protein content, decrease in seed fatty acid content, increase in seed protein content, decrease in seed fatty acid content, alteration of leaf glucosinolate content, increase in seed fatty acid content, increase in seed protein content, decrease in seed fatty acid content, increase in seed protein content, decrease in seed fatty acid content, increase in seed protein content, subcreation of seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            orthologue of a thalecress transcription factor isolated from Corn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 823 BP; 172 A; 258 C; 247 G; 144 T; 0 U; 2 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-666-642-194_COPY_111_164 (1-54) x AD003201 (1-823)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.42e-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249.00
88.89%
81.48%
83.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                       $$999999999999999999999999999999
```

21 AbnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40 1 AspGlyPhelysTrpArgLysTyTclyLysSerValLysAsnasnileAsnLysArg g G ઠ

RESULT 6 ADO62507 ADO62507;

ADO62507 standard; DNA; 823

BP

Transcription factor G1274 orthologous sequence, SEQ ID 974.

(first entry)

15-JUL-2004

Plant; transcription factor; transgenic plant; abiotic stress tolerance; sencits stress tolerance; cold tolerance; heat tolerance; low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.

Zea mays. BXBXSXXXXXXXXXXXXXX

4O2004031349-A2

15-APR-2004.

Reuber TL;

18-SEP-2003; 2003WO-US030292

```
The present invention relates to novel plant transcription factor proteins (I) and nucleotide sequences (II) (ADOS1534-ADO63778). The sequences can be used to produce transgenic plants, which overexpress (II), where the transgenic plant has an altered trait as compared to a compared to increased tolerance to abiotic stress, increased tolerance to abiotic stress, increased tolerance to obsort; increased tolerance to obsort; increased tolerance to obsort; increased tolerance to obsort; increased tolerance to freezing conditions, increased tolerance to fleat, increased tolerance to leav, increased tolerance to freezing conditions, increased tolerance to freezing conditions, increased tolerance to diditions, increased tolerance to multiple fungal pathogens, increased sensitivity to AGA, altered sugar sensiting, latered stem morphology, altered sugar sensiting, early flowering, altered development, altered branching pattern, altered stem morphology, altered sugar, altered second ripone structure, altered second ripone, altered development, altered second ripone, altered development, altered cell profileration, altered col development, altered cell profileration, altered col development, altered development, altered development, altered second ripone, cell tered promass, large second inge, darged mass, light green or gray leaves, glossy leaves, altered second profileration, altered second profileration, altered second profileration, altered second profileration content, alt
                                                                                                                                                                                                                                                                                                                         New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                                                                                                                                                                                                  Sherman BK;
                                                                                                                                                                                                            Adam LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 823 BP; 172 A; 258 C; 247 G; 144 T; 0 U; 2 Other;
                                                                                                                                                                                                            Creelman RA, , Keddie JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 974; 510pp; English.
                                                                                                                                                                                                                                    Riechmann JL, Haake V, Dubell AN,
                                                                                                                                                                                                            Ratcliffe O,
                                                                                                                                                             (MEND-) MENDEL BIOTECHNOLOGY INC.
                                                               18-SEP-2002; 2002US-0411837P.
17-DEC-2002; 2002US-0434166P.
24-APR-2003; 2003US-0465809P.
                                                                                                                                                                                                                                                                                WPI; 2004-330163/30.
                                                                                                                                                                                                            Heard JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     electronic
                                                                                                                                                                                                            Jiang C,
%XCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCX
```

```
1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x ADO62507 (1-823)
             Length:
Matches:
Conservative:
Mismatches:
Indels:
             1.42e-26
249.00
88.89%
                                                      81.48%
83.56%
12
                                                         Best Local Similarity:
                                        Percent Similarity:
Alignment Scores:
                                                                      Query Match:
                                                                                                                                         ઠે
```

```
ABNTYTYTLYBCYBSerSerGluGlyCyBSerValLyBLyBAgValGluArgABpGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes a transgenic plant comprising a recombinant polynucleotide of any one of more than 500 nucleotide sequences fully defined in the specification or its complement. The method of the invention can be used to produced a plant having altered traits such as: enhanced tolerance to abiotic stress; glyphosphate tolerance; hormone sensitivity; disease resistance; sugar sensing; early or late flowering;
                                                                                                                                                                                                                                                            glyphosphate tolerance; hormone sensitivity; disease resistance; sugar sensing; flowering; flower structure; stem bifurcation; branching pattern; apical dominance; trichome; stem morphology; root growth; root hair; seed development; cell proliferation; cell differentiation; premature senescence; necrosis; plant size; leaf morphology; seed morphology; seed blochemistry; root anthocyanin; plant anthocyanin; light response; shade avoidance; bioinformatic; transcription factor; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Broun PE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New transgenic plant comprising a recombinant polynucleotide of any or of more than 500 nucleotide sequences, useful in bioinformatic search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Haake V;
Keddie J,
                                                                                                                                                                                                                                                   transgenic; plant; enhanced tolerance to abiotic stress;
                                                                       41 AspAspAlaAlaTyrValileThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Riechmann JL, Jiang C, Heard JE, 1
Ratcliffe O, Adam LJ, Reuber TL,
                                                                                                                                                                                                                          Plant transcription factor polynucleotide #1006.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yu G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; SEQ ID NO 1531; 435pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ratcliffe O, Adam LJ
Dubell AN, Pineda O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-FEB-2003; 2003US-00374780.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-APR-2001; 2001US-00837944.
                                                                                                                                         ADI43068 standard; DNA; 1663
                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SHERMAN B K.
RIECHMANN J L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CREELMAN R A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADAM L J.
REUBER T L.
KEDDIE J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HEARD J E.
HAAKE V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATCLIFFE O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-132245/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DUBELL A N. PINEDA O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BROUN P E.
PILGRIM M 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JIANG C.
                                                                                                                                                                                                                                                                                                                                                                                                                      JS2004019927-A1.
                                                                                                                                                                                              22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Creelman RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                               39-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pilgrim ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sherman BK,
    21
                                                                                                                                                                     ADI43068;
                                                                                                                                                                                                                                                                                                                                                                                            геа шаув.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PILG/)
(DUBE/)
(PINE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HAAK/)
(CREE/)
(RATC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ADAM/)
(REUB/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (XQGG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHER/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BROU/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEDD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIEC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (JIAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEAR/
                                                                                                                              ADI43068
                                                                                                              RESULT
                                                                                   셤
```

```
altered flower structure, change in stem bifurcations, altered branching pattern, reduced apical dominance, reduced trichome density; lack of trichomes; reduced atrichome development; altered trichomes; cardiced etcopic trichome development; altered trichome development; increases in trichome number; altered stem morphology; increased root growth; increased root hairs; altered seed development; altered cell proliferation or cell differentiation; rapid development; premature senescence; increased necrosis; increase in seedling or plant size; decreased plant size; leaf morphology; seed morphology; seed morphology; necessed in root anthocyanins; increase in plant anthocyanins, or alteration in light response or shade avoidance. The transgenic plant, polynucleotides and polypeptides are useful in transcription factor, and an orthologue of Arabiodopsis thaliana transcription factors isolated in the invention, that can be used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1078 GACGGATTCAAGTGGAGGAAGTACGGAAAGAAGCCGTCAAGAACAGCCCAAATCCAAAGG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Corn; transcription factor; ss; gene; plant; transgenic; abiotic stress; cold tolerance; heat tolerance; drought; osmotic stress; phosphate limitation; potassium limitation; nitrogen limitation; hormone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change; meristem cell differentiation; phyllotaxy; apical dominance; trichome development; seed development; premature senescence; delayed senescence; lethality; necrosis; plant size; leaf morphology; secondary metabolism; light response; shade avoidance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AspGlyPheLysTrpArgLysTyrGlyLysIysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Corn orthologue of Thalecress transcription factor, cDNA #183.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1663 BP; 417 A; 453 C; 494 G; 299 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-666-642-194_COPY_111_164 (1-54) x ADI43068 (1-1663)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      creation of a transgenic plant with altered traits.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADO03208 standard; cDNA; 1663 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.6e-26
249.00
88.89%
81.48%
83.56%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004045049-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AD003208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zеа mays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
ADO03208
XX
AC
ADO
XX
XX
DT
O1-J
XX
XX
COTH
XW
COTH
X
       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
22-MAR-2000; 2000US-0053392.

22-MAR-2000; 2000US-00533648.

06-APR-2000; 2000US-0053392.

16-NOV-2000; 2000US-0019194.

27-MAR-2001; 2001US-00819142.

17-APR-2001; 2001US-0081744.

30-JAN-2002; 2002US-00171468.

09-AUG-2002; 2002US-0025066.

09-AUG-2002; 2002US-0025067.

09-AUG-2002; 2002US-00225067.

09-AUG-2002; 2002US-00225067.

25-FEB-2003; 2003US-0334166P.
                                                                                    ZHANG J.
FROMM M E.
HEARD J E.
RIECHMANN J L.
                                                                                                                                                        PILGEIM M L.
CREELMAN R A.
DUBELL A N.
RATCLIFFE O.
KUMIMOTO R.
                                                                                                           ADAM L J.
BROUN P E.
PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                                     SHERMAN B K.
                                                                                                                                                   SAMAHA R S.
                                                                                                                                              JIANG C.
                                                                                                                                         XO G.
                                                                                                                                                   (SAMA/) (PILG/) (CREE/) (CUBE/) (RATC/) (KUMI/) (SHER/) (SHER/)
                                                                                                      (RIEC/)
(ADAM/)
(BROU/)
(PINE/)
(REUB/)
(KEDD/)
(YUGG/)
                                                                                    ZHAN/)
                                                                                           (FROM/)
(HEAR/)
```

Adam LJ, Broun PE; ng C, Samaha RS; Fromm ME, Heard JE, Riechmann JL, Adam LJ, Broun Pi Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; L, Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R; Pilgrim ML, Sherman BK; Zhang J, Pineda O,

WPI; 2004-225755/21.

New transgenic plant, useful in developing phenotypes with altered or improved characteristics or traits.

Claim 1; SEQ ID NO 1622; 213pp; English.

The invention relates to a transgenic plant compilers a recomblementary sequence comprising a sequence encoding a polypeptide, that initiates transcription (i.e. a transcription (factor) from Arabidopsis, Soybean, Rice, Rape or Corn, comprising any of the sequences appearing as Ab001588 constitution, comprising any of the sequences appearing as Ab001588 constitution, inducible or tissue sepecific promoter and a transgenic constitutive, inducible or tissue sepecific promoter and a recombinant polynucleotide described above), a host cell comprising the expression cassette, producing a modified plant having a modified trait, identifying a factor that is modulated by or interacts with a polypeptide encoded by the polynucleotide sequence and identifying at least one downstream polynucleotide sequence that is subject to a regulatory effect of any of the polymetectide sequence that is subject to a regulatory effect of any of the polymetic plant is useful for producing a plant that has an altered trait e.g. an enhanced tolerance to about stress (increased tolerance to chilling, germination in cold conditions, freezing tolerance, tolerance to chilling, germination in cold conditions, freezing tolerance to cast, to hear, tolerance to phosphate limitation, tolerance to pospate limitation, decreased sensitivity to abscisic acid, an altered response to ethylene, disease resistance, altered susceptibility to Restring, latered susceptibility to Restring, altered susceptibility to Restring, altered susceptibility to Restring, latered susceptibility to Restring, altered susceptibility and researce of Erysiphe, altered susceptibility to Pseudomonas syringae, a terred susceptibility to Scleroting, altered susceptibility to Restring, altered susceptibility to Restring, altered susceptibility to Restring, altered susceptibility and researce architectural change, a change in period of flowering, an inflorescence architectural change, a change in The invention relates to a transgenic plant comprises a recombinant

13-SEP-1999; 99US-00394519. 21-JAN-2000; 2000US-00489716. 17-FEB-2000; 2000US-0056720. 22-MAR-2000; 2000US-005332591. 22-MAR-2000; 2000US-00533029.

10-APR-2003; 2003US-00412699.

```
differentiations, a lack of a shoot meristem, reduced meristem cell
differentiation, altered phyllotaxy, altered branching pattern, reduced
apical dominance, reduced trichome density, ectopic trichome development,
altered trichome development, altered stem morphology, increased root
growth, increased root hairs, altered seed development, altered cell
convent, increased root hairs, altered seed development, altered cell
sensescence, lethality, increased necrosis, an increase in seedling or
plant size, decreased plant size, a change in leaf morphology, increased
altered leaf development, increased leaf size and mass, glossy leaves,
leaf cell expansion, change in seed morphology, altered seed coloration,
increased seed size, decreased leaf size and mass, glossy leaves,
leaf blochemistry, increased leaf wax, an alteration in leaf prenyl lipid
content, increased leaf insoluble sugars, decreased leaf insoluble
sugars, increased leaf insoluble sugars, decreased leaf sity acid
content, an alteration of leaf glucosinolate content, change in seed
blochemistry, an increase in seed fatty acid
content, increase in seed fatty acid content, decrease in seed fatty acid
content, increase in seed protein content, decrease in seed fatty acid
content, alteration of genes involved in secondary metabolism, increase
in root anthocyaning, increase in not genes involved in secondary metabolism, increase
in root anthocyaning, increase in part anthocyaning, and alteration in
light response or shade avoidance. The present sequence encodes an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            orthologue of a thalecress transcription factor isolated from Corn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1663 BP; 417 A; 453 C; 494 G; 299 T; 0 U; 0 Other;
              8866666666666666666666666666666666
```

```
1 AspGlyPheLysTrpArgLysTyrGlyLysLysLysLysAsnAsnLysArg 20
                                                                                                             US-10-666-642-194_COPY_111_164 (1-54) x ADO03208 (1-1663)
           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                  Gaps:
           3.6e-26
249.00
88.89%
81.48%
83.56%
                                                        Best Local Similarity:
                                         Percent Similarity:
Alignment Scores:
                                                                    Query Match:
                                                                                                                                         8
```

1078 GACGGATTCAAGTGGAGGAAGTACGGGAAGAAGGCCGTCAAGAACAGCCCAAATCCAAGG 1137 1138 AACTACTACCGCTGCTCGTCGAGGGCTGCGGCGTGAAGAGCGGGTGGAGAGGGACCGC 1197 21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40 셤 유 ò 8 ò

Corn orthologue of Thalecress transcription factor, cDNA #179. ADO03200 standard; cDNA; 680 BP. ADO03200; RESULT 9

01-JUL-2004 (first entry)

Corn; transcription factor; ss; gene; plant; transgenic; abiotic stress; cold tolerance; heat tolerance; drought; osmotic stress; phosphate limitation; potassium limitation; nitrogen limitation; hormone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change; meristem cell differentiation; phyllotaxy; apical dominance; trichome development; seed development; premature senescence; delayed senescence; lethality; necrosis; plant size; leaf morphology; secondary metabolism; light response; shade avoidance.

Zea mays

US2004045049-A1

04-MAR-2004

```
22 MAR-2000; 200005-00533029.
22 MAR-2000; 2000US-00533029.
22 MAR-2000; 2000US-00533030.
22 MAR-2000; 2000US-00533648.
06 APR-2000; 2000WO-US009448.
16-NOV-2000; 2000US-00713994.
27-WAR-2001; 2001US-00819142.
17-APR-2001; 2001US-00819142.
                                                                                                                        2002US-0434166P.
2003US-00374780
                       2000US-00489376
2000US-00506720
                                                                                                      2002US-00225066
     10-APR-2003; 2003US-00412699
                                                                                                2002US-00171468
                                                                                                           2002US-00225067
                                                                                                                  2002US-00225068
                                                                                                                                          ZHANG J.
FROMM M E.
HEARD J E.
RIECHMANN J L.
                                                                                                                                                                                                                             DUBELL A N. RATCLIFFE O. KUMIMOTO R. SHERMAN B K.
                                                                                                                                                                                                                        CREELMAN R A
                                                                                                                                                                             PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                                                                 PILGRIM M L.
                                                                                                                                                                 ADAM L J.
BROUN P E.
                                                                                                                                                                                                           SAMAHA R S.
                                                                                                                                                                                                     JIANG C.
                                                                                                                        17-DEC-2002;
25-PEB-2003;
                                    22-MAR-2000;
                                                                                               14-JUN-2002;
                                                                                                      09-AUG-2002;
                                                                                                            09-AUG-2002;
                                                                                                                  09-AUG-2002;
                                                                                                                                                                                                                                                             thang J,
                                                                                                                                                                        (BROU/)
(PINE/)
(REUB/)
                                                                                                                                                                                                                              (DUBE/)
                                                                                                                                                                                                                                                 SHER/)
                                                                                                                                          (ZHAN/)
                                                                                                                                                                                                      (JIAN/)
                                                                                                                                                                                           KEDD/)
                                                                                                                                                                                                 YUGG/)
                                                                                                                                                                                                                   PILG/)
                                                                                                                                                                                                                        CREE/)
                                                                                                                                                       HEAR/
                                                                                                                                                                  ADAM/)
                                                                                                                                                                                                            (SAMA/)
                                                                                                                                                            RIEC/
```

Broun PE; Fromm MB, Heard JB, Riechmann JL, Adam LJ, Broun Pi , Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; «L, Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R; Pineda O, Re Pilgrim ML, Sherman BK;

WPI; 2004-225755/21.

New transgenic plant, useful in developing phenotypes with altered or improved characteristics or traits.

Claim 1; SEQ ID NO 1614; 213pp; English.

The invention relates to a transgenic plant comprises a recombinant polynucleotide having a polynucleotide sequence or its complementary sequence comprising a sequence encoding a polypeptide, that intiates transcription (i.e. a transcription factor) from Arabidopsis, Sobbean, cranscription (i.e. a transcription factor) from Arabidopsis, Sobbean, cranscription (i.e. a transcription factor) from Arabidopsis, Sobbean, cranscription a transcription factor Ab003537 or Ab003559. Also included are using a transgenic plant to grow a progeny plant, an expression cassette (comprising a constitutive, inducible or tissue-epecific promoter and a recombinant polynucleotide described above), a host cell comprising the expression cassette, producing a modified plant having a modified trait, identifying a factor that is modified plant having a modified trait, identifying a factor that is modified plant that a polypeptide encoded by the polynucleotide sequence and identifying at least one downstream collynucleotide sequence that is subject to a regulatory effect of any of the polypeptides encoded by the polynucleotide described above. The transgenic plant is useful for producing a plant that has an altered trait e.g. an enhanced tolerance to abiotic stress (increased colerance to chilling, germination in cold conditions, freezing tolerance to concern colling alt, tolerance to phosphate limitation, tolerance to potassium

WO2004031349-A2

```
timination, descreased sensitivity to abscriator, attered to creatively, reduced sensitivity to abscriator, descreased sensitivity to abscriate acid, an altered response to ethylene, disease resistance, altered susceptibility to betaviour, altered susceptibility to Europians, altered susceptibility to Europians, altered susceptibility to Erysiphe, altered susceptibility to Sclerotinia, altered sugar sensing, improved seed susceptibility to Sclerotinia, altered sugar sensing, improved seed conferentiation and seedling vigor, early flowering, late flowering, extended conferentiation, altered phyllotaxy, altered branching pattern, reduced apical dominance, reduced trichome density, ectopic trichome development, altered stem morphology, increased rock altered trichome development, altered stem morphology, increased rock growth, increased rock hairs, altered stem morphology, increased rock growth, increased plant size, altered seed development, altered seed sensecence, lethality, increased necrosis, an increase in seedling or plant size, decreased plant size, altered sensecence, lethality, increased leaf size, altered seed size, decreased leaf size, altered seed size, increased leaf size, decreased leaf size, altered seed size, decreased leaf size, altered seed size, size-assed seed size, altered seed size, size-assed leaf size, altered seed size, size-assed leaf size, altered seed size, size-assed seed size, altered seed size, size-assed seed size, altered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              orthologue of a thalecress transcription factor isolated from Corn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present sequence encodes an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The
limitation, decreased sensitivity to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            response or shade avoidance.
```

Sequence 680 BP; 129 A; 206 C; 213 G; 132 T; 0 U; 0 Other;

```
GACGGCTACAAGTGGAGGAAGTACGGCAAGAAGTCCGTCAAGAACAGCCCCAACCCAAGG 116
                                                                                                                                                                               20
                                                                                                                                                                 21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                   1 AspGlyPheLysTrpArgLysTyrGlyLysSyrValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                 US-10-666-642-194_COPY_111_164 (1-54) x ADO03200 (1-680)
                                   Conservative:
Mismatches:
Indels:
            Length:
Matches:
                                                                      Gaps:
          1.54e-26
248.00
92.59%
77.78%
83.22%
                                              Best Local Similarity:
Query Match:
                                   Percent Similarity:
Alignment Scores:
                                                                                                                                            57
                                                                                                                    ò
                                                                                                                                         셤
                                                                                                                                                                  ઠે
                                                                                                                                                                                      ద
                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                      셤
```

Transcription factor G1274 orthologous sequence, SEQ ID 973. ADO62506 standard; DNA; 680 BP. 15-JUL-2004 (first entry) ADO62506; RESULT 10

Plant; transcription factor; transgenic plant; abiotic stress tolerance; sencits estress tolerance; cold tolerance; heat tolerance; low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.

Zеа шаув.

US-10-666-642-194_COPY_111_164 (1-54) x ADO62506 (1-680)

```
The present invention relates to novel plant transcription factor proteins (1) and nucleotide sequences (II) (ADO6154-ADO63798). The sequences can be used to produce transgenic plants which overexpress (II), where the transgenic plant has an altered trait as compared to a non-transgenic plant or wild-type plant. The transgenic plant compises conclusions and altered trait selected from increased tolerance to abidic stress, increased tolerance to cold, increased tolerance to cold, increased tolerance to cold, increased tolerance to cold, increased tolerance to heat, increased tolerance to mattered trait selected from increased tolerance to freezing conditions, increased tolerance to increased tolerance to mitrogen conditions, increased tolerance to mylopopate conditions, increased tolerance to compared disease and particularly Erysiphe, Pusarium and Botrytis, increased sensitivity to ABA, reduced sensitivity to ABA, reduced sensitivity to ABA, reduced sensitivity to ABC, altered supar sensing, increased tolerance to supars, altered carbon/nitrogen sensing, early flowering, latered subor meristem development, altered branching pattern, altered shot meristem development, altered branching pattern, altered stem morphology, altered vascular tissue structure, reduced fertility, altered trichome structure, altered vascular tissue structure, altered branching pattern, altered sensecence, altered trichome development, altered branching pattern, altered cell proliferation, altered cell inferentiation, altered sensecence, altered trichome development, altered sensecence, altered seed development, altered seed flagment, altered cell proliferation, altered cell expensed leaf seed collaring, development, altered bhade sensecence, altered seed trichome cell expenses, large seedlings, dwarfed plants, death, lethality when overexpressed, altered seed large seed large cell increased last grant and mass, light green leaves, change in leaf shade, altered death, lethality when overexpressed, altered death say and leaves, altered see
                                                                                                                                                                                                                                                                                                                                                    New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                                                                                                                                                                                                                Reuber TL;
                                                                                                                                                                                                                                                Adam LJ, Re
Sherman BK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 680 BP; 129 A; 206 C; 213 G; 132 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68
8 4 8 4 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                             Jiang C, Heard JE, Ratcliffe O, Creelman RA, Riechmann JL, Haake V, Dubell AN, Keddie JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rectly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 973; 510pp; English.
                                                                                                                                                                                                        (MEND-) MENDEL BIOTECHNOLOGY INC.
                                                                                                                   18-SEP-2002; 2002US-0411837P.
17-DEC-2002; 2002US-0434166P.
24-APR-2003; 2003US-0465809P.
                                                                              18-SEP-2003; 2003WO-US030292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.54e-26
248.00
92.59%
77.78%
83.22%
                                                                                                                                                                                                                                                                                                           WPI; 2004-330163/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                     15-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ectronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
```

CREELMAN R A.

```
Alignment Scores:
Pred. No.:
57 GACGGCTACAAGTGGAAGGAAGTACGGCAAGAAGTCCGTCAAGAACAGACCCCCAACCCAAGG 116
                                                                                                                                                                                                                                                                                                                                                                    Corn; transcription factor; ss; gene; plant; transgenic; abiotic stress; cold tolerance; heat tolerance; drought; osmotic stress; phosphate limitation; potassium limitation; nitrogen limitation; hormone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change; meristem cell differentiation; phyllotaxy; apical dominance; trichome development; seed development; premature senescence; trichome development; necrosis; plant size; leaf morphology; secondary metabolism; light response; shade avoidance.
                                                                                  20
                                                               21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                      Corn orthologue of Thalecress transcription factor, cDNA #178.
                                                                                                                                                    54
                                                                                                                                  41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                     ADO03199 standard; cDNA; 743 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-00533648.
2000US-00533648.
2000WO-US009448.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-00713994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002US-00171468.
2002US-00225066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-00532591
2000US-00533029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-00533030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-APR-2003; 2003US-00412699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-00506720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001US-00819142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001US-00837444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002US-00225068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002US-0434166P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003US-00374780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002US-00958131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002US-00225067
                                                                                                                                                                                                                                                                                                      01-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZHANG J.
FROMM M E.
HEARD J B.
RIECHMANN J L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YU G.
JIANG C.
SAMAHA R S.
PILGRIM M L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADAM L J.
BROUN P E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US2004045049-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-MAR-2000;
22-MAR-2000;
06-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-MAR-2001;
17-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-SEP-1999;
21-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-FEB-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L7-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zea mays.
                                                                                                                                                                                                                                                                     ADO03199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (JIAN/)
(SAMA/)
(PILG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZHAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PINE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (YUGG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FROM/)
(HEAR/)
(RIEC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ADAM/
(BROU/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEDD/
                                                                                                                                                                                                  RESULT 11

AD003199

XX

XX

XX

AD003199

XX

XXX

AD003199

DE

COID

XXX

COID

COI
                                                                                             셤
                                                                                                                                                                셤
                              g
                                                                 ò
                                                                                                                                  ò
```

```
Constitutive, inducible or tissue-specific promoter and a recombinant constitutive, inducible or tissue-specific promoter trait, identifying a factor that is modulated by or interacts with a polypeptide encoded by the polymuclectide sequence and identifying at least one downstram polymuclectide sequence and identifying at least one downstram polymuclectide sequence and identifying at least one downstram columning in the polypeptide encoded by the polymuclectide described above. The transgenic plant is useful for producing a plant that has an altered crait e.g. an enhanced tolerance to ablotic stress (increased tolerance to chilling, germination in cold conditions, freezing tolerance, tolerance to chart, tolerance to phosphate limitation, tolerance to portassium cold conditions, freezing tolerance, tolerance to chart, tolerance to phosphate limitation, tolerance to potassium altered susceptibility to preudomonas syringe, altered usceptibility to preudomonas syringe, altered susceptibility to preudomonas syringe, altered susceptibility to Sclerotinia, altered and susceptibility to greudomonas syringe, altered susceptibility to sclerotinia, altered engar sensing, improved seed graniation and seedling vigor, early flowering, late flowering, actioned collections of flowering, and florescence architectural change in cell control of flowering, and florescence architectural change, a change in cell downnance, reduced trichome development, altered seed development, altered seed development, increased not than seed in seed coloration, clared trichome development, increased neck plant size, a change in seed development, increased seed size, altered teaf development, increased leaf deve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        biochemistry, an increase in seed oil content, decrease in seed oil content, increase in seed fatty acid content, decrease in seed fatty acid content, increase in seed protein content, decrease in seed protein content, increase in seed protein state alteration in seed proyl lipid content, increase in seed sterols, upregulation of genes involved in secondary metabolism, increase in root anthocyanins, increase in plant anthocyanins, and alteration in light response or shade avoidance. The present sequence encodes an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a transgenic plant comprises a recombinant polynucleotide having a polynucleotide sequence or its complementary sequence comprising a sequence encoding a polypeptide, that initiates transcription (i.e. a transcription factor) from Arabidopsis, Soybean, Rice, Rape or Corn, comprising any of the sequences appearing as ADO01588 -ADO03527 or ADO03530-ADO03559. Also included are using a transgenic plant to grow a progent plant, an expression cassette (comprising a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New transgenic plant, useful in developing phenotypes with altered or improved characteristics or traits.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       orthologue of a thalecress transcription factor isolated from Corn.
                                                                                                                                                                                                                                   Fromm ME, Heard JE, Riechmann JL, Adam LJ, Broun PE; Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 743 BP; 158 A; 210 C; 216 G; 159 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 1613; 213pp; English.
DUBELL A N.
RATCLIFFE O.
KUMIMOTO R.
                                                                                                                                      SHERMAN B K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-225755/21.
                                                                                                                                                                                                                                        Fromm ME,
                                                                                                                                                                                                                                   Zhang J, Fro
Pineda O, Re
Pilgrim ML,
Sherman BK;
                                                                                       (KUMI/)
(SHER/)
                                              RATC/)
DUBE/
```

743

```
The present invention relates to novel plant transcription factor proteins (1) and nucleotide sequences (11) (ADO61534-ADO63778). The sequences can be used to produce transgenic plants, which overspress (II), where the transgenic plant has an altered trait as compared to a non-transgenic plant or wild-type plant. The transgenic plant comprises an altered trait selected from increased tolerance to abiotic stress, increased tolerance to cold, increased tolerance to cold, increased tolerance to cold, increased tolerance to heat, increased germination in cold, increased tolerance to heat, increased tolerance to learned tolerance to low phosphate conditions, increased tolerance to disease, including fungal disease and particularly Erysiphe, Fusarium and Botryris, increased tolerance to encased tolerance to including fungal disease and particularly Erysiphe, Fusarium and Botryris,
                                                                                                                                                                                                                                   20
                                                                                                                                                                            77
                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plant; transcription factor; transgenic plant; abiotic stress tolerance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                                                                                                                               1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                               21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  osmotic stress tolerance; cold tolerance; heat tolerance; low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Adam LJ, R
Sherman BK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transcription factor G1274 orthologous sequence, SEQ ID 972.
                                                                                                                                                                                                                                                                                                       138 GACGACCCCAGCTACGTGGTGACGACGTACGAGGGGATGCAC 179
                                                                                                                                                                                                                                                                                 41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis 54
   4 8 4 0 0
2
                                                                                                        US-10-666-642-194_COPY_111_164 (1-54) x ADO03199 (1-743)
              Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jiang C, Heard JE, Ratcliffe O, Creelman RA, Riechmann JL, Haake V, Dubell AN, Keddie JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 972; 510pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MEND-) MENDEL BIOTECHNOLOGY INC.
                                                                                                                                                                                                                                                                                                                                                                                          ADO62505 standard; DNA; 743 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-SEP-2002; 2002US-0411837P.
17-DEC-2002; 2002US-0434166P.
24-APR-2003; 2003US-0465809P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-SEP-2003; 2003WO-US030292.
248.00
92.59%
77.78%
83.22%
                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-330163/30.
                             Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004031349-A2.
              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zea mays.
                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                        쉱
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                            쉽
                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                셤
```

```
CC glyphosate, increased sensitivity to ABA, reduced sensitivity to ABA, increased sensitivity to ACC, altered sugar sensing, increased tolerance to sugars, altered carbon/nitrogen sensing, early flowering, late flowering, latered flower structure, loss of flower determinacy, reduced televering, altered shoot meristem development, altered branching pattern, altered steem morphology, altered vascular tissue structure, reduced apical dominance, altered trichome density, altered branching pattern, altered trichome structure, altered trichome development, altered shade considered trichome structure, altered seed development, altered shade considered sensescence, abnormal embryo development, altered phase change, altered sensescence, abnormal embryo development, altered phase change, altered sensescence, abnormal embryo development, altered programmed cell catter as sensescence, abnormal embryo development, altered data fister increased blomass, latered seed increased blomass, latered seed size and mass, laight green leaves, change in leaf shape, increased leaf size and mass, laight green con gray leaves, glossy leaves, altered abaxial/adaxial polarity, altered seed coloration, altered seed size, altered seed shape, large content, altered seed protein content, altered seed protein content, altered seed protein content, altered seed shape, and decreased anthocyanin levels, not entrol the printed specification, but was obtained in electronic format directly from with a percent in the sequence data for this patent did content, altered benefile of the printed specification, but was obtained in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Soybean, transcription factor; ss; gene; plant; transgenic; abiotic stress; cold tolerance, heat tolerance; drought; osmotic stress; phosphate limitation; potassium limitation; nitrogen limitation; hormone sensitivity; disease resistance; sugar sensing; seed germination; flowering; inflorescence architectural change; meristem cell differentiation; phyllotaxy; apical dominance; trichome development; seed development; premature senescence; delayed senescence; lethality; necrosis; plant size; leaf morphology; secondary metabolism; light response; shade avoidance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21 AsnIyrIyrLysCysSerSerGluGlyCysSerVallysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Soybean orthologue of Thalecress transcription factor, cDNA #267.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41 AspAspAlaAlaTyrValIleThrThrTyrGluGlyValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-666-642-194_COPY_111_164 (1-54) x ADO62505 (1-743)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 743 BP; 158 A; 210 C; 216 G; 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADO03196 standard; cDNA; 974 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.73e-26
248.00
92.59%
77.78%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AD003196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AD003196,
                $$$$$$$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

JS2004045049-A1.

```
improved characteristics or traits.
                                        2000US - 00532591.
2000US - 00533029.
2000US - 00533030.
2000US - 00533392.
2000US - 0053348.
                                                                            2000US-00713994.
2001US-00819142.
2001US-00837444.
                                                                                                     2002US-00171468
2002US-00225066
                                   2000US-00506720
                                                                                              2002US-00958131
                                                                                                                        2002US-00225068
                                                                                                                                   25-PEB-2003; 2003US-00374780
           10-APR-2003; 2003US-00412699
                                                                                                                 2002US-00225067
                                                                                                                                                                                                                                                             Fromm ME, Her
                                                                                                                                               ZHANG J.
FROMM M E.
HEARD J E.
RIECHMANN J L.
                                                                                                                                                                                                                             CREELMAN R A.
DUBELL A N.
RATCLIFFE O.
                                                                                                                                                                                                      YU G.
JIANG C.
SAMAHA R S.
PILGRIM M L.
                                                                                                                                                                                                                                                KUMIMOTO R. SHERMAN B K.
                                                                                                                                                                                                                                                                                                 WPI; 2004-225755/21.
                                                                                                                                                                                   PINEDA O.
REUBER T L.
KEDDIE J S.
                                                                                                                                                                            BROUN P B.
                                                                                                                                                                        ADAM L J.
                                                          22-MAR-2000;
22-MAR-2000;
06-APR-2000;
                                                                                   27-MAR-2001;
17-APR-2001;
                                               22-MAR-2000;
22-MAR-2000;
                                                                              16-NOV-2000;
                                                                                                30-JAN-2002;
                                                                                                     14-JUN-2002;
                                                                                                           09-AUG-2002;
                                                                                                                       09-AUG-2002;
                                    17-PEB-2000;
                                                                                                                 09-AUG-2002;
                                                                                                                                                                                                                                                                        Pineda Ó, F
Pilgrim ML,
04-MAR-2004
                                                                                                                                                                                                                                                                                     Sherman BK;
                                                                                                                                                                                                                                                                    Zhang J,
                                                                                                                                               ZHAN/)
                                                                                                                                                                                                                        (PILG/)
(CREE/)
(DUBE/)
(RATC/)
(KUMI/)
                                                                                                                                                                                               (KEDD/)
(YUGG/)
(JIAN/)
                                                                                                                                                                             (PINE/)
                                                                                                                                                                        ADAM/
                                                                                                                                                                                         (REUB/
                                                                                                                                                                                                                   (SAMA/
                                                                                                                                                            HEAR/
                                                                                                                                                                  RIEC/
```

Promm ME, Heard JE, Riechmann JL, Adam LJ, Broun PE, Reuber TL, Keddie JS, Yu G, Jiang C, Samaha RS; Creelman RA, Dubell AN, Ratcliffe O, Kumimoto R;

New transgenic plant, useful in developing phenotypes with altered or

Claim 1; SEQ ID NO 1610; 213pp; English.

The invention relates to a transgenic plant comprises a recombinant polynucleotide having a polynucleotide sequence or its complementary sequence comprising a sequence encoding a polypeptide, that initiates transcription (i.e. a transcription factor) from Arabidopsis, Soybean, Rice, Rape or Corn, comprising any of the sequences appearing as ADO1588 - AD001537 or AD001537 or ARABOSSS9. Also included are using a transgenic plant to grow a progeny plant, an expression cassette (comprising a constitutive, inducible or tissue-specific promoter and a recombinant polynucleotide described above), a host cell comprising the expression cassette, producing a modified plant having a modified trait, identifying a factor that is modulated by or interacts with a polypeptide encoded by the polynucleotide sequence and identifying at least one downstream polymucleotide sequence that is subject to a regulatory effect of any of the polymucleotide sequence that is subject to a regulatory effect of any of the polympeptides encoded by the polymucleotide described above. The transgenic plant is useful for producing a plant that has an altered trait e.g. an enhanced tolerance to ablotic stress (increased tolerance to chilling, germination in cold conditions, freezing tolerance to tolerance to heat, tolerance to heat, tolerance to

```
Limitation, decreased sensitivity to nitrogen limitation), altered because to possession.

Limitation, decreased sensitivity to nitrogen limitation), altered because chivlene, disease resistence, altered susceptibility to creptopen certification and sechylene, disease resistence, altered susceptibility to coercive, altered susceptibility to Fusarium, altered susceptibility to correct susceptibility to Sclerotinia, altered susceptibility increased trichome development, altered by School Schoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                522 AACTACTACAATGTTCAAGTGGAGGATGCAGTGTGAAGAAAAGGGTGGAAAGGGATAGA 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 AsnīvrīvriysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             orthologue of a thalecress transcription factor isolated from Soybean.
salt, tolerance to phosphate limitation, tolerance to potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 974 BP; 294 A; 177 C; 195 G; 308 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGACTACAGCTACGTGATAACAACATATGAAGGTGTGCAC 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41 AspAspAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-666-642-194_COPY_111_164 (1-54) x ADO03196 (1-974)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.48e-26
247.00
90.74%
83.33%
82.89%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADO62502,
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

ADO62502 standard; DNA; 974 BP. 15-JUL-2004 (first entry) AD062502;

Transcription factor G1274 orthologous sequence, SEQ ID 969.

Plant; transcription factor; transgenic plant; abiotic stress tolerance; osmotic stress tolerance; cold tolerance; hast tolerance; low nitrogen tolerance; low phosphate tolerance; fungal disease; glyphosate resistance; flowering; fertility; seed development; ds.

Glycine max.

40

Reuber TL;

Adam LJ, R Sherman BK;

```
The present invention relates to novel plant transcription factor proteins (1) and nucleotide sequences (11) (ADO61534-ADO63778). The proteins (1) and nucleotide sequences (11) (ADO61534-ADO63778). The equences can be used to produce transgenic plant as an altered trait as compared to a control of the transgenic plant or wild-type plant. The transgenic plant comprises an altered trait selected from increased tolerance to abiotic stress, increased tolerance to obly increased tolerance to cond, increased tolerance to obly increased germination in cold, increased tolerance to discreased tolerance to low nitrogen conditions, increased tolerance to increased tolerance to low nitrogen conditions, increased tolerance to increased tolerance to whith increased tolerance to multiple fungal pathogens, increased tolerance to increased colerance to multiple fungal pathogens, increased tolerance to altered shoot meristen development, altered branching pattern, altered send dominance, altered second trichown density, altered trichown estructure, altered one sendence such capable fungal pathogens altered cell proliferation, altered cell expansion, altered cell proliferation, altered cell expansion, altered cell proliferation, altered cell expansion, altered seed function altered seed development, altered cell proliferation, altered seed development, altered cell expansion, altered seed coloration, altered seed functed cell expansion, altered seed functed cell expansion, altered seed coloration, altered seed development, altered seed fun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   decreased anthocyanin levels. Note: The sequence data for this patent did
not form part of the printed specification, but was obtained in
electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant polynucleotide encoding transcription factor polypeptides, useful for producing transgenic plants with advantageous properties compared to a reference plant.
                                                                                                                                                                                                                                                                                                                     Jiang C, Heard JE, Ratcliffe O, Creelman RA, Riechmann JL, Haake V, Dubell AN, Keddie JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 969; 510pp; English.
                                                                                                                                                                                                                                                                     (MEND-) MENDEL BIOTECHNOLOGY INC
                                                                                                                       18-SEP-2003; 2003WO-US030292.
                                                                                                                                                                          18-SEP-2002; 2002US-0411837P
                                                                                                                                                                                              17-DEC-2002; 2002US-0434166P. 24-APR-2003; 2003US-0465809P.
                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-330163/30.
                         WO2004031349-A2
                                                                       15-APR-2004.
```

U; 0 Other; Sequence 974 BP; 294 A; 177 C; 195 G; 308 T; 0

```
US-10-666-642-194_COPY_111_164 (1-54) x ADO62502 (1-974)
         Length:
Matches:
Conservative:
Mismatches:
                                                          Indels:
                                                                      Gaps:
          3.48e-26
                      247.00
90.74%
83.33%
82.89%
                                                 Best Local Similarity:
                                   Percent Similarity:
Alignment Scores:
                                                         Query Match:
DB:
```

The invention describes a transgenic plant comprising a recombinant polynucleotide of any one of more than 500 nucleotide sequences fully

Claim 1; SEQ ID NO 1530; 435pp; English.

```
1 AspGlyPheLysTrpArgLysTyrGlyLysLysSerValLysAsnAsnIleAsnLysArg 20
                                                                                                                                                                                                                                                                    transgenic; plant; enhanced tolerance to abiotic stress; glyphosphate tolerance; hormone sensitivity; disease resistance; glyphosphate tolerance; hormone sensitivity; disease resistance; sugar sensing; flowering; flowers structure; stem bifurcation; branching pattern; apical dominance; trichome; stem morphology; root growth; root hair; seed development; cell proliferation; cell differentiation; premature senescence; necrosis; plant size; leaf morphology; seed morphology; seed anthocyanin; plant anthocyanin; light response; shade avoidance; bioinformatic;
            21 AsnTyrTyrLysCysSerSerGluGlyCysSerValLysLysArgValGluArgAspGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Broun PE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New transgenic plant comprising a recombinant polynucleotide of any or of more than 500 nucleotide sequences, useful in bioinformatic search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haake V;
Keddie J,
                                                                                                              462 GATGACTACAGCTACGTGATAACAACATATGAAGGTGTGCAC 421
                                                                                                41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Heard JE, 1
Reuber TL,
                                                                                                                                                                                                                                                Plant transcription factor polynucleotide #1005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L, Jiang C, Hea
D, Adam LJ, Reul
Pineda O, Yu G;
                                                                                                                                                                         ADI43067 standard; DNA; 1696 BP.
                                                                                                                                                                                                                                                                                                                                                                         transcription factor; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-FEB-2003; 2003US-00374780.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .8-APR-2001; 2001US-00837944.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sherman BK, Riechmann JL,
Creelman RA, Ratcliffe O,
Pilgrim ML, Dubell AN, Pi
                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SHERMAN B K.
RIECHMANN J L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HEARD J E.
HAAKE V.
CREELMAN R A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADAM L J.
REUBER T L.
KEDDIE J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATCLIFFE O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-132245/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DUBELL A N.
PINEDA O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BROUN P E.
PILGRIM M 1
                                                                                                                                                                                                                                                                                                                                                                                                                         JS2004019927-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JIANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YO G.
                                                                                                                                                                                                                          22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JAN-2004.
                                                                                                                                                                                                 ADI43067;
                                                                                                                                                                                                                                                                                                                                                                                                   Zea mays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PINE/)
(YUGG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HEAR/)
(HAAK/)
(CREE/)
(RATC/)
(ADAM/)
(REUB/)
(KEDD/)
(REUD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (RIEC/)
(JIAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHER/)
                                                                                                                        g
                                                                                                                                                                         ò
                                                 8
```

```
continue in the specification of the complement. The method of the continue in the specification of the specification of the specification can be used to produced a plant having altered traits such as ensitivity; disease resistance; sugar sensing; early or late flowering; altered flower structure, change in stem biturcations, altered branching pattern, reduced apical dominance, reduced trichome density; lack of trichomes; reduced ectopic trichome development; altered trichome development; increase in trichome number; altered stem morphology; increased root growth; increased root hairs; altered seed development; premature senescence; increased root hairs; increase in seedling or plant size; decreased plant size; leaf morphology; seed morphology; seed blochemistry; increase in root anthocyanins; increase in plant blant chickensisty; increase in root anthocyanins; increase in plant cransgenic plant, polymicleotides and polypeptides are useful in transgenic plant, polymicleotides and polypeptides are useful in transgenic rearson factor, and an orthologue of Arabiodopsis thaliana transcription factors isolated in the invention, that can be used in the transgenic plant with altered traits.
defined in the specification or its complement. The method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1696 BP; 433 A; 436 C; 407 G; 420 T; 0 U; 0 Other;
   $$$$$$$$$$$$$$$$$$$$$$
```

US-10-666-642-194_COPY_111_164 (1-54) x ADI43067 (1-1696) Length:
Matches:
Conservative:
Mismatches:
Indels: Gaps: 2e-25 244.00 88.89% 79.63% 81.88% Percent Similarity: Best Local Similarity: Query Match: DB: Alignment Scores: Pred. No.: Score:

ò 셤 ò

g

ઠ

41 AspAspAlaAlaTyrVallleThrThrTyrGluGlyValHis 54

Search completed: August 26, 2005, 00:18:37 Job time : 397 secs

